OHIO STATE UNIVERSITY
MAR
LIBRARY

FIRE ENGINEERING

A Consolidation of
FIRE AND WATER ENGINEERING *and* THE FIRE ENGINEER

MARCH 21, 1928

The "Fighting Face" of the Famous Ahrens-Fox Pumper.

Known to Fire Chiefs Everywhere

"Nothing is Too Good for Fire Service, and Nothing But the Best Will Do"- Ahrens-Fox

Quality Apparatus

The Ahrens-Fox Fire Engine Co.
Cincinnati

45 New Buildings in 3 Different Districts!

Suppose these new buildings are in your town. Are they protected by your present fire alarm system?

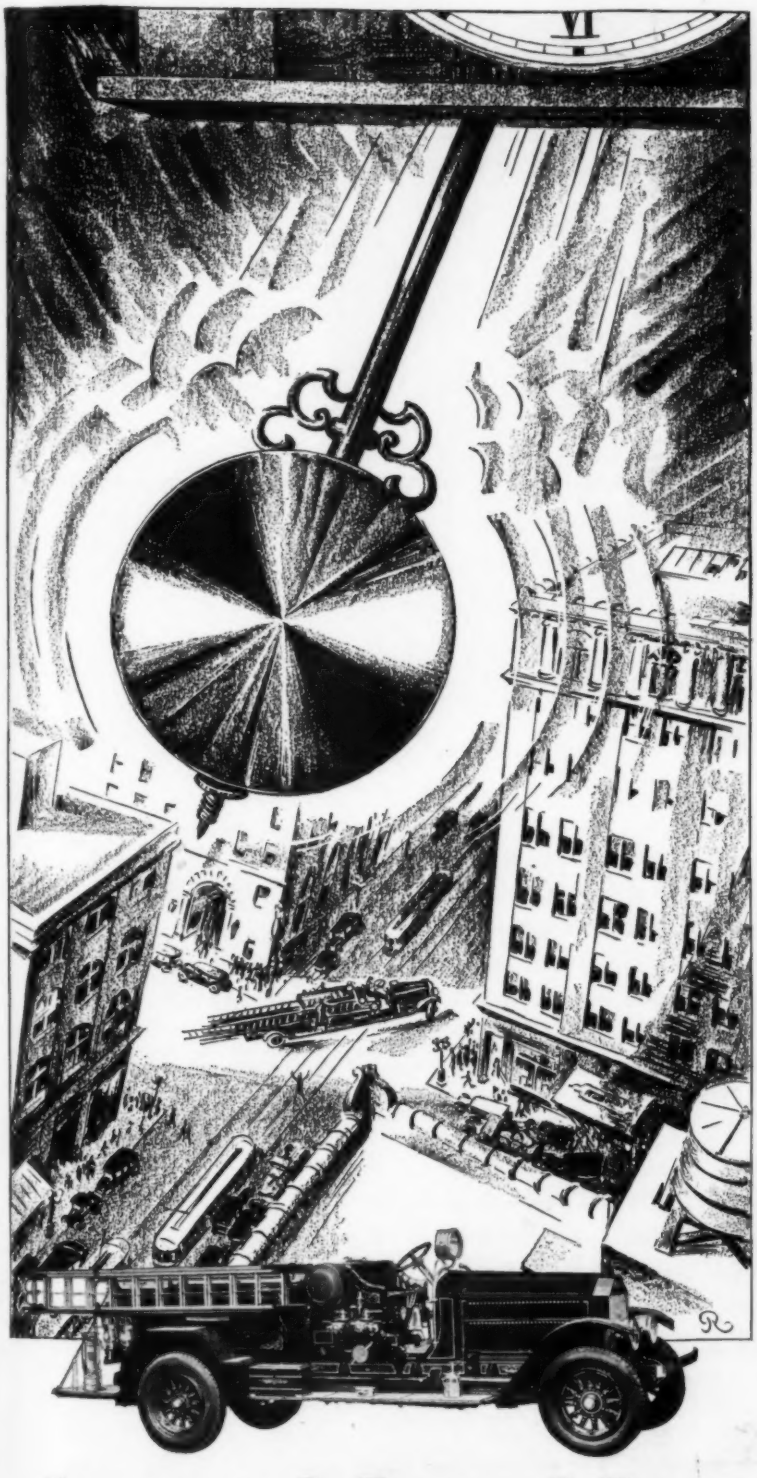
Could you add three stations and the necessary call boxes quickly—easily—and without heavy cost? You can if your system is a FEDERAL full automatic code, to which you add stations by simply connecting two wires to the new equipment.

Eliminating mistakes — saving seconds — speeding response — a FEDERAL is the recognized master of fire protection. The value of it is apparent when your town has blanketed protection.

Write us for specifications and estimates. Our service is without obligation or cost to you.

FEDERAL ELECTRIC COMPANY
8700 SOUTH STATE STREET, CHICAGO, ILLINOIS

FEDERAL



When minutes—mean *Lives*

A burning building...property endangered...lives perhaps.

Then comes the real test of fire apparatus.

Speed in reaching the fire...when minutes, even seconds count. American-LaFrance Apparatus is geared to a speed of 65 miles an hour or more when speed is necessary.

Reliability when failure may mean disaster. 100 hours without a shutdown ...13 days consecutive pumping under severe conditions...these records have proved American-LaFrance reliability.

Consistent performance when reliability counts has put American-La France Fire Apparatus in 90% of America's fire departments. Write for descriptive literature. American-LaFrance & Foamite Corporation, Engineers and Manufacturers, Dept. A2, Elmira, N.Y.

AMERICAN-LA FRANCE & FOAMITE PROTECTION

A Complete Engineering Service for Extinguishing Fires

The Journal of the Fire Protection Profession Since 1877

MEMBER
Audit Bureau of Circulations
Assoc. Business Papers, Inc.

FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER

Published Every Other Wednesday

SUBSCRIPTION PRICE
U. S. $3 a year; Canada $3.50
Foreign $4; Single copies, 25c.

Issued at Lyon Block, Albany, N. Y.
by CASE-SHEPPERD-MANN PUBLISHING CORP.
Also publishers of "Water Works Engineering," Technical Books, etc.

Executive, Editorial, Advertising and Subscription Offices,
225 West 34th Street, New York City
All communications, including Editorial, Advertising and Subscription, can be directed to either of the above addresses.

KARL M. MANN, President and Advertising Director
FRED SHEPPERD, Managing Editor
I. HERBERT CASE, Vice-Pres. and General Manager
H. S. ESSEX, Advertising Manager; ROBERT H. LOCKWOOD, Editor; N. N. WOLPERT, Asst. Editor
HAROLD T. MURRAY, Western Manager, 30 N. Michigan Ave., Chicago, Ill. Telephone: Franklin 0138

EDITORIAL ADVISORY BOARD

JOHN KENLON, Chief, New York Fire Dept., Founder of New York Fire College
JOHN C. MORAN, Chief, Fire Department Hartford, Conn.
GEO. J. KUSS, Former Deputy Chief N. Y. F. D.; Lecturer on Fire Fighting, Delehanty Institute, N. Y.
A. A. BELL, Chief of Fire Brigades and Engineer "America Fore" Group of Fire Insurance Cos.

"Draw Your Own Conclusions"

THERE are various ways of getting ahead in the world; but one of the best we know is summed up in the words "Hard Work."

¶ Typical of how ambitious readers of FIRE ENGINEERING are advancing is the following experience, described in a letter we have just received from Chelsea, Mass.:

FIRE ENGINEERING,
Book Department,
New York City.

Dear Sirs:

I received the book, "Questions and Answers for Lieutenants and Captains," in first class condition about February 29, 1928, for which I thank you. Must say it is a very fine book on fire fighting, in fact, much better than I expected.

Just about now, those three books are going to assist me a lot. I am preparing to take a Deputy's examination in our department. Already I have learned some mighty fine points on oil and celluloid fires found in your books. No hustling fire officer in any up-to-date fire department in the country should be without your fire books.

My company answers 525 runs a year, to all classes of fires in a thickly populated district, about 23,000 people to a square mile. Draw your own conclusions as to how valuable your books are going to be to me!

Respectfully yours,
(Signed) CAPT. GEORGE F. SEAVER.

¶ Good for you, George!

The Publishers

CONTENTS

MARCH 21, 1928

VOL. LXXXI No. 6

Water Hazard in Calcium Carbide Fires, by Chief W. W. Stephen (Portrait) 229
Emphasizing the Fact That Water Should Not Be Used and Importance of Proper Handling.

Making the Stretch to the Thirteenth Floor 231
Two Suggestions from Officers Based on Fact of Both Elevator and Standpipe Being Out of Commission.

Handling the Boiler Shop Fire (Illustrated) 233
Don't Overlook Available Water Supplies—Lose No Time in Summoning Assistance.

With the Editor 235
Comments on Current Events and Live Topics by Our Editorial Staff.

Questions and Answers 237
Replies to Questions on All Manner of Subjects of Fire Fighting and Fire Protection.

Recent Important Fires Specially Reported (Illustrated) 239
Large Part of Business Area of Peekskill Destroyed —Burnings of Two Weeks.

Fire Department Activities 253
Newsy Notes from All Over the Country with Matters Firemanic.

Fire Department Improvements 254
Record of Business Activities in the Fire Protection Field.

False Alarms 256
The Humorous Side of the Fire Protection Profession.

Contents of this issue copyrighted, 1928, by Case-Sheppherd-Mann Publishing Corp., 225 W. 34th St., New York City
Entered as second class matter at the Post Office, Albany, N. Y., January 29, 1926, under the Act of March 3, 1879.

d-817-L

New Schroeder Hotel Where Stand Pipe Tests Were Made With Waukesha Equipped Pumper

We Were Wrong

It has never been the purpose of the Waukesha Motor Company to mislead by making ambiguous or inaccurate statements about their product. Candor and honesty both in publicity and product are necessary for success in business. That is why we wish to make this correction. The height of the Schroeder Hotel stand pipe was not 225 feet, as given in our January 25th advertisement, but 281 feet, according to Wm. Striebel, Master Mechanic of the Milwaukee Fire Department.

Waukesha six-cylinder engines for fire pumper service are built with eight power ratings and will handle pumps ranging from 400 to over 750 gallons capacity according to Underwriters Test Requirements. Every Waukesha Pumper engine has easily passed every Underwriter's Test with power to spare. The "Ricardo Head," Girder Type Crank Case, Duplex Oiling System, Truncated Cylinders and huge 3½ inch crankshaft are but a few of the features which make Waukesha engines the most outstanding feature of truly modern Fire Apparatus.

D-822-L

FIRE EQUIPMENT DIVISION

WAUKESHA MOTOR COMPANY

Waukesha 956 St. Paul Ave. **Wisconsin**

Eastern Sales Office *Eight W. 40th Street* *New York City*

You needn't excavate with a Darling

In a few minutes time one man can service a Darling Hydrant.

It's tough when an entire hydrant must be unearthed just because the valve or seat requires renewing. Not so with Darling Fire Hydrants! All you do is remove the cover and then the complete insides can be taken out, inspected and renewed wherever worn. Darling Fire Hydrants are built to give the highest percentage of service possible under present day conditions. These three major requirements are met satisfactorily:

1. Greatest possible volume of water; 2. Long life;

3. Accessibility.

Other exclusive Darling features are fully explained in a catalog of interest to all those who appreciate time-saving improvements. Write for it.

DARLING VALVE & MFG. CO.
Williamsport, Pa.

New York
Chicago
Oklahoma City
Houston

DARLING
FIRE HYDRANTS

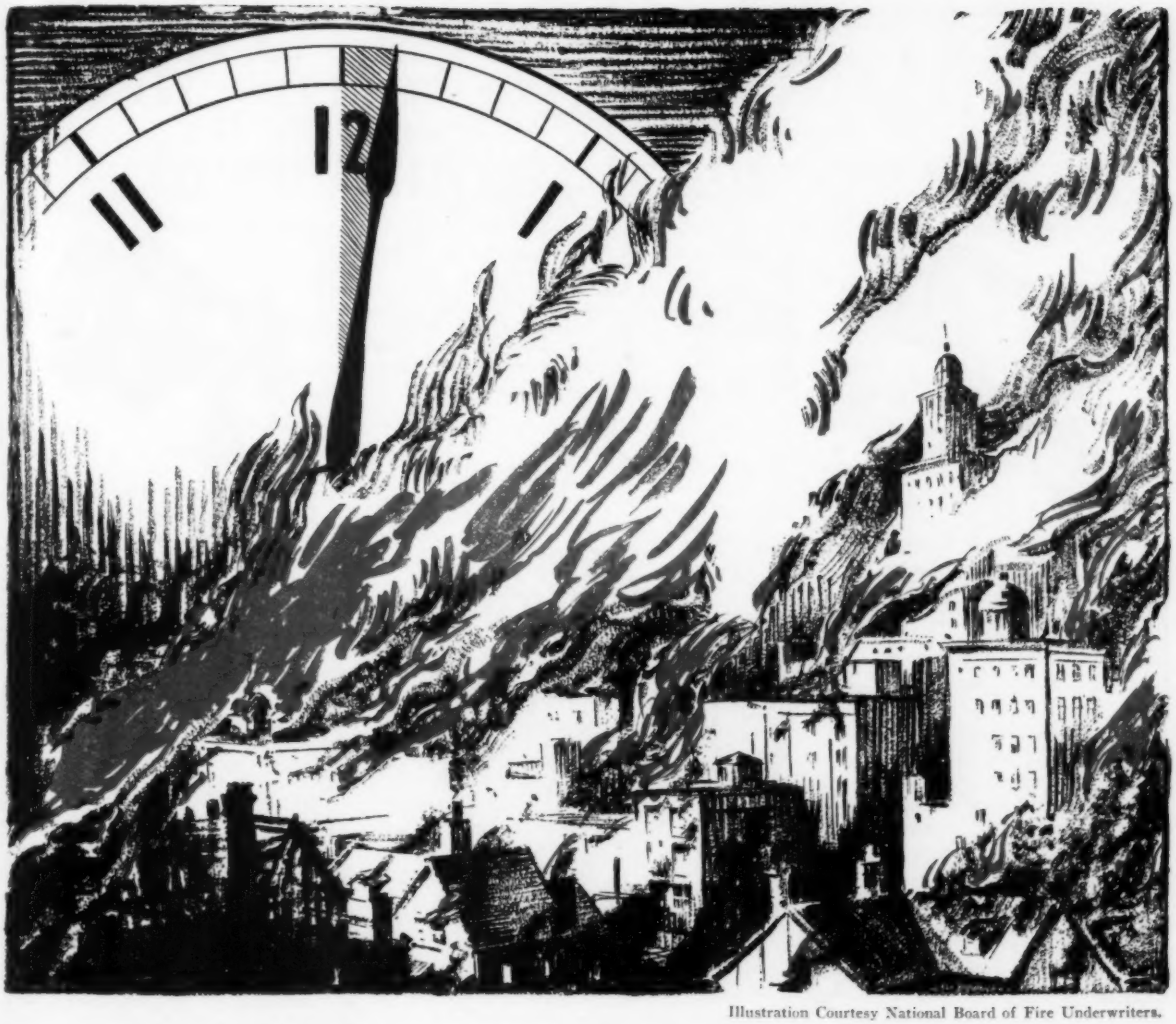


Illustration Courtesy National Board of Fire Underwriters.

$1241.20 Every *Burning* Minute!

The final official cost figures for last year of America's great annual bonfire have just been released. They show $1,241.20 went up in smoke every burning minute—$1,539,070 every day—or a total of $561,980,751 for the year.

And this is a period when there was no big conflagration to swell the total; for as the National Board of Fire Underwriters states: "The year will go down in 'fire' history as one of many small fires."

Coincident with the international Shakespearean celebration now in progress, one recalls to mind the great bard's burning epigram: "Behold, how great a matter a little fire kindleth."

When property is protected by A. D. T. Central Station Service, all fires are nipped in the bud; for every single second the never-sleeping electric equipment is on the job. If the watchman is lax, he is checked up—not next week, or next month, but WITHIN THE NEXT FEW MINUTES. If a fire starts it is instantly detected and the alarm transmitted by automatic devices. Losses in A. D. T. protected premises are kept at a minimum.

Only a few pennies of the $1,241.20 per minute loss was in places equipped with this service.

You believe in fire prevention and fire protection—if you do not understand A. D. T. Service thoroughly, write to us for booklets giving complete information.

PROTECTION A.D.T. SERVICES

Controlled Companies

AMERICAN DISTRICT TELEGRAPH COMPANY

183 Varick Street, New York, N. Y.

STERLING Traffic Sirens Meet Every Signal Requirement

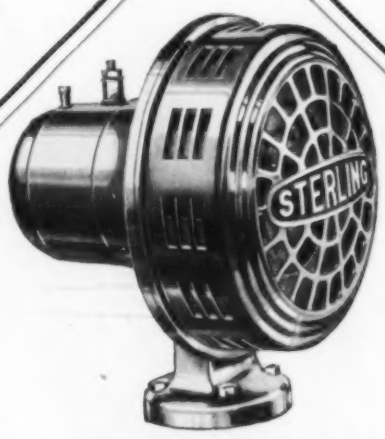
A complete line of Sirens built by the oldest and largest exclusive makers in the Siren field. Tested under all kinds of conditions and emergencies—compared time and time again with other makes—Sterling has always proved itself superior. Let the Siren itself convince you. Send for any type illustrated here or in our catalogue, subject to your approval.

Sterling F Advance Traffic Clearing Siren

Located at points of heavy traffic the type F Siren sounds its warning and clears the way before apparatus is in sight. Protected by weather proof housing. Price.....$35.00

Sterling Electric Siren No. 12 (Without Projector)

A safe and practical Siren for fire apparatus, ambulance and all emergency vehicles. Has unusual range. Furnished either with or without projector and with either pedestal, bar or dash bracket. Price.....$40.00



The Sterling Big Chief

The most powerful apparatus Siren made. Clears the way for blocks in advance by its powerful tone; giving safe, speedy passage to apparatus. Furnished with all mountings and connections ready to put on. Price....$90.00

Sterling Motorcycle Siren—Model B

Designed especially to meet the need of fire and police departments for a small, powerful vehicle signal. Furnished with special bracket. Price $35.00

Sterling Type H Hand Siren

This signal is especially popular on fire trucks. Has a deep, powerful tone. Special gears give high speed to motor. Price.....$35.00

THE STERLING SIREN FIRE ALARM CO., 61 Allen St. Rochester, N. Y.

STERLING

OLDEST AND LARGEST EXCLUSIVE MAKERS OF SIREN SIGNALS

FIRE ENGINEERING

(A Consolidation of Fire and Water Engineering and The Fire Engineer)

The Journal of the Fire Protection Profession

VOLUME LXXXI MARCH 21, 1928 NUMBER 6

Water Hazard in Calcium Carbide Fires

Importance of Proper and Intelligent Handling and Storage—Water Should Not Be Used—Some Cases of Fire-Fighting

By CHIEF W. W. STEPHEN, Fire Department, Southern Manganese Corporation, Anniston, Ala.

IT is very important that chiefs should know the action of water on certain chemicals, as such knowledge may avert serious consequences which might otherwise result from ignorant handling. One such chemical, and the hazards resulting from wrong handling of it, are described in the following article:

Chief W. W. Stephen, Southern Manganese Corp., Anniston, Ala.

Calcium carbide is a solid material, dark or grayish in color, with a specific gravity of about two and two-tenths. It is made in electric furnaces by the fusion of coke and lime and is manufactured in the Niagara Falls district, in Alabama and in other localities where hydro-electric power is available in large quantities.

In itself it is inert, incombustible and as harmless as field stone. When exposed to the chemical action of water, however, it evolves acetylene gas, producing about five cubic feet of gas per pound of carbide and leaving a residue of slaked lime. The acetylene thus produced is highly explosive, extremely inflammable, and is used for lighting and welding purposes.

Calcium carbide fire hazards may be roughly classified as follows:

Fire Hazards of the Chemical

First, hazards arising from its manufacture in an electric furnace plant: Most of these are of thermal rather than chemical origin, having to do with the handling of this material in a molten or incandescent state, and are such as attend any electric furnace operation. Practically all work of this kind is carried on amid fire resisting surroundings, whereby the risk is reduced to a minimum.

Second, hazards arising from opening carelessly or from accident to its containers, under circumstances whereby water from meteorological or industrial sources may come in contact with it: Calcium carbide is stored and shipped in cylindrical metal cans with tightly fitting covers. Its storage is regulated by very stringent rules promulgated by the codes of fire preventive organizations. Chief Engineer A. M. Schoen, of the Southeastern Underwriters' Association, at Atlanta, Ga., is, in the writer's estimation, an outstanding authority on the risks of this material.

Third, hazards arising from the presence of calcium carbide in buildings of a combustible nature or in fire resistive buildings that may be subjected to outside heat exposure. There is no hazard from the action of fire alone, but great danger from the possible application of water used to extinguish it.

If correct methods of storing are used the possibility of such situations occurring will be eliminated.

Some Typical Cases of Fire-Fighting

The writer has had the experience of having to fight a number of carbide fires, using foam, carbon tetrachloride and dry powders. The following are typical

"IF correct methods of storing are used the possibility of hazardous situations occurring will be eliminated. There is no hazard from the action of fire alone, but great danger from the possible application of water used to extinguish it."

cases where each of the above named agents was successful,—

Case No. 1—Foam Used

Case one,—Wooden elevator casing in carbide furnace plant was ignited by contact of hot carbon electrode being carried by over head crane.

Fire was quickly extinguished by use of a two and a half gallon foam extinguisher, care being taken to keep stream from directly hitting carbide, or splashing on it, which was accomplished with more success than would have been the case had plain water or a soda-acid tank been used.

Case No. 2—Carbon Tetra-Chloride Used

Case two,—Fire originated from unknown cause in some sacking piled where crushed carbide was being loaded from delivery chutes into metal cans and where there was a considerable accumulation from spillage on the floor.

A two and a half gallon foam extinguisher was discharged on the blaze, but instead of extinguishing it the foam stream seemed to interact with the carbide, producing acetylene gas and making an outburst that became hotter and increased in volume.

A five gallon pump and several one quart pump type extinguishers using carbon tetra-chloride were then put in operation. The liquid from these quickly extinguished the fire and did not seem to interact with the carbide.

Case No. 3—Several Agents Used

Case three—Fire occurred in a calcium carbide screening and sizing plant, built for temporary use of frame construction, two stories high, with wooden boxing around elevators and screens: An attempt was made to extinguish the fire with a forty gallon foam engine and a forty gallon soda-acid tank, both of which added to the intensity of the fire, causing several violent explosions, while the flames involved a considerable area of the upper story.

There was available for use by the plant and city departments a large quantity of soda ash, or commercial sodium carbonate, kept in two hundred pound sacks.

A number of men were put to work throwing this material on the fire with shovels and from sacks, while portions of the burning structure were pulled down by hooks and by a grapnel on the end of a steel cable pulled by a powerful crane.

Several five gallon and a large number of one quart carbon terta-chloride extinguishers were successfully used, while several two and a half gallon foam tanks were used on portions of the building where there was no loose carbide.

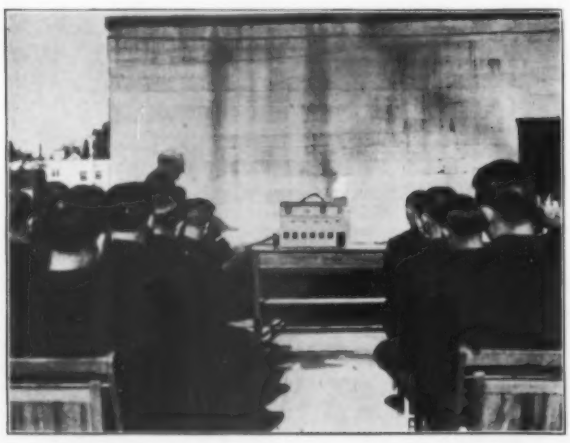
By means of all these agencies the fire was gotten under control and extinguished, the entire lower floor being saved intact, after the upper part of the building was considerably damaged.

What Safety in Handling Depends Upon

We would say, in conclusion, that safety in handling calcium carbide depends upon its storage amid dry surroundings in fire resisting buildings used for no other purpose and isolated from external heat exposure.

In the event of carbide fires, dry powder chemicals, such as sodium carbonate, sodium bicarbonate, or even dry sand are useful and effectual agents in smothering the blaze.

The use of carbon tetra-chloride to extinguish calcium carbide fires seems absolute'y successful, and the only draw-back to the employment of this liquid on a large scale is its high cost.



Los Angeles Firemen Watch Dust Explosion Experiments

Members of the Los Angeles, Cal., fire department learn by watching. First Assistant Chief S. H. Dodd has inaugurated a new kind of college. The men are shown watching him perform experiments to show dust explosion hazards of certain materials. Various kinds of dust are forced into the miniature grain elevator by means of bellows. Dangerous dusts explode upon coming in contact with fire inside, and force the roof off the elevator model.

CHIEF'S WIFE CREDITS PENNY WITH ACQUITTAL FOR MURDER

Mrs. Gatlin Takes Blame for Murder of Father to Shield Mother's Name—One of Most Dramatic Stories Ever Heard in Court

By D. G. SPENCER

A lucky penny in her shoe is credited by Mrs. Alma Gatlin, wife of Gene Gatlin, chief of the fire department of Reidsville, N. C., with her acquittal of murder on Feb. 22nd., after one of the most dramatic trials ever staged in North Carolina.

The beautiful young wife of Reidsville's fire chief was tried in the little town of Wentworth, N. C., for the murder of her father, Smith T. Petty, who was slain with an axe in his home Jan. 10th, 1927, and his body buried in the basement.

The trial brought out one of the most dramatic stories ever heard in the courts of the Old North State. In a drunken fit, according to testimony, Petty tried to kill his family. He was in the act of choking his daughter Alma who was preparing to go to her work in which she helped to support the family. The mother grabbed the axe which the 16-year-old son had brought into the room to protect the members assaulted, and wielding it with fatal effect struck her husband down.

Alma Petty was going to call an officer, but the mother forbade her, and the body was secretly interred in the basement. Three months later Mrs. Petty died, unable to survive the shock. On her deathbed her daughter Alma begged her to confess, but the plea came too late. In May Alma Petty confessed to her pastor, Rev. Thomas F. Pardue, but claiming that she herself struck the fatal blow. In July she wed Gene Gatlin, chief of the fire department of Reidsville.

In August an investigation started of the death of Smith T. Petty because of rumors of foul play. In September Petty's body was found in the basement. Based on her confession to the Rev. Mr. Pardue which the minister divulged to the grand jury, Alma Petty Gatlin was arrested and held in jail until her trial in February. On February 22nd she was found not guilty, after the jury had listened to her story how she took the blame to shield her mother's good name.

Mrs. Gatlin says her acquittal is due to a lucky penny she had in her shoe on the day her fate rested with the jury. Her husband stood by her throughout the lonely months she spent in jail and was constantly at her side under the heavy grilling she went through in the courtroom. She received hundreds of telegrams and letters congratulating her upon her noble attitude in the matter assuming the blame to shield her mother's name.

Fordyce, Ark., to Have New Truck—Fordyce, Ark., will receive new fire apparatus within the next month.

Making the Stretch to the Thirtieth Floor

Two Suggestions from Fire Department Officers Based on Fact of Both Elevator and Standpipe Being Out of Commission

CONSIDERABLE interest has been aroused by an article appearing on page 146 of FIRE ENGINEERING, issue of February 22, under the heading, "How to Stretch Lines to Thirtieth Floor of Building." This article gave the views of Deputy Chief James W. Heffernan, in charge of the First Division, Manhattan, New York City, and of Deputy Chief Henry B. Helm, in charge of the Second Division, on this important matter.

The question was originally raised in a recent examination for promotion to the rank of captain in the New York Fire Department. The question was stated as in the box below.

Chief Heffernan took the stand that an emergency standpipe of three-inch hose should be built downward from every sixth floor of such a building.

Chief Heffernan's plan grew out of his own bitter experience with a fire high up in a building next to the R. G. Dun Building at Broadway and Reade Street two winters ago where the standpipe parted in the cellar resulting in a fifth alarm and the extension of the fire into the top floors of the Dun Building. That night Heffernan promised himself that he never again would be confronted with such a situation without having some prescribed remedy known to every officer under his command.

On the other hand, Chief Helm held that the emergency standpipe of 2½-inch hose should be built downward from one central point only, immediately below the fire.

Chief Helm's solution was blueprinted and sent to all companies in the 2nd Division with the very humble explanation that the idea was largely that of Lieut. Edward Connors, of Engine Co. 20, in whose quarters Chief Helm is located. For two months they had collaborated on the plan. Chief Helm contends that the plan is simple because it can be supervised by one officer from one central point; that there are no kinks or bends in his line; that two lines are more dependable than one in case of burst, etc.

Two interesting discussions of this phase of modern fire-fighting have since been received by FIRE ENGINEERING, one from Lieut. John G. Pfann, Engine Company No. 213, New York Fire Department, stationed in Brooklyn, and the other from Lieut. Harry B. Scheve, of the Baltimore, Md., Fire Department.

Lieut. Scheve, in transmitting his suggestions, writes:

In the last issue of FIRE ENGINEERING there appeared an article in reference to getting a line in service on a fire on the thirtieth floor of a building under construction, the elevator and standpipe being out of service.

These articles by two New York deputy chiefs and a lieutenant were in themselves very instructive and enlighting and brought before the fire-fighting profession the difficulties which they have to face and contend with today. The questions which this article deals with arose out of several recent fires in New York skyscrapers and the last captain's promotional examination.

I am enclosing my answer to this question:

To take a line of hose to fire on thirtieth floor of building—standpipe is out of order—elevator is out of service—two methods to get hose line in operation.

Tools Required

29th floor: 1 sec. 3" hose, 2 men. 1 hose roller, 1 man. 4 sec. 2½" hose, 8 men. 1 hose rope, 1 man. 1 axe and 1¼" pipe, 1 man. Spanners and hose straps, 13 men. 1 Reducer 3" to 2½" if couplings are not all 2½".

25th floor: 1 sec. 3" hose, 2 men. Spanners and hose straps. 1 hose roller, 1 man. 4 men. 1 6' ceiling hook and 1 axe, 1 man.

21st floor: 1 sec. 3" hose, 2 men. 1 hose rope, 1 man. 1 hose roller, 1 man. Spanners and hose straps, 5 men. 1 6' ceiling hook and 1 axe, 1 man.

17th floor: 1 sec. 3" hose, 2 men. Spanners and hose straps. 1 hose roller, 1 man. 4 men. 1 6' ceiling hook and 1 axe, 1 man.

13th floor: 1 sec. 3" hose, 2 men. 1 hose roller, 1 man. 1 6' ceiling hook and 1 axe, 1 man. 1 hose rope, 1 man. 5 men. Spanners and hose straps.

9th floor: 1 sec. 3" hose, 2 men. Spanners and hose straps. 1 hose roller, 1 man. 4 men. 1 6' ceiling hook and 1 axe, 1 man.

5th floor: 1 hose roller, 1 man. Spanners and hose straps. 1 6' ceiling hook, 1 man. 1 axe, 1 man. 4 men. 1 hose rope, 1 man.

1st floor: 1 Siamese. 2 sec. 3" hose leading into siamese, 2 lines, 4 secs. If line leads to elevator shaft 1 section of 3" hose from elevator shaft to portable siamese. If the department uses relief gate valves, 1 should be inserted on the last section at street (3" hose) so that pressure on line can be relieved when putting up.

First Method

Procedure upon arrival on fire. Ground first company to arrive on fire-ground will pull 1 section of 3" hose off wagon, fold same three times making a bundle, put hose strap on each end of bundle and two men start up stairway to 29th floor with same; one man take axe and 1¼" pipe to 29th floor with same; one man take hose rope, one man take a hose roller and also a reducer if couplings on 3" hose are not cut to 2½"; men will have spanners so that all connections are made tight and one man will go up without anything, the men carrying the tools and hose will alternate in carrying same from time to time, the man who is empty-handed, relieving all men as may be necessary. This will take six men or as many as may be available for duty in a building from first company.

Second company to arrive will pull off three sections of 2½" hose and proceed to 29th floor with same; this operation will take six men, and one man empty-handed, to give a lift as may be needed. This will take seven men, as many as will be available from second company.

Third company to arrive will pull one section of 3" hose and 2 men will proceed to 25th floor with same; also one section of

THE Question as stated: "How would you get water to the thirtieth floor of a building in which both standpipe and elevator are out of commission? Explain definitely what men you would need, what orders you would give them and how the necessary pressure could be obtained."

2½" hose and two men will proceed with this to 29th floor, making four sections of 2½" hose and one section of 3" hose on 29th floor; one man get hose roller and go to 25th floor, one man get 6' ceiling hook and axe and proceed to 25th floor. This will take six men, as many as will be available from third company.

Men on 29th floor will lower line of 3" hose out over hose roller after making the proper knots on same (3" hose), about 10 feet from male end until men on 25th floor can reach same with 6' ceiling hook, pull in, connect their 3" line up and signal to 29th floor to pull up; when about 5 feet of 3" hose is in on 29th floor hose rope will be made fast and signal to men on 25th floor to lower their line entirely.

The men on the 29th floor will meanwhile connect the four sections of 2½" hose together and up to 3" line using a reducer if necessary, put pipe on 2½" line and proceed to 30th floor or stairway awaiting water.

Fourth company to arrive will pull off one section of 3" hose and two men will proceed up stairway to 21st floor with same; one man will get a hose roller and proceed to 21st floor; one man will get an axe and 6' ceiling hook and proceed to 21st floor; 1 man will get a hose rope and proceed to 21st floor and one man will go empty-handed to give a hand where necessary. This will take six men. On reaching 21st floor man with 6' ceiling hook will reach out and get end of 3" line from above and connect their 3" line to same, also making hose rope fast to male end of line with proper knots about 2 feet from coupling and making other end of hose rope fast on floor of building.

Fifth company to arrive will get one section of 3" hose and two men will take same to 13th floor; one man will get a hose hose roller and go to 17th floor; one man will get a 6' ceiling hook and axe and proceed to 17th floor. This will take four men. Upon reaching 17th floor with 3" line, reach out with 6' ceiling hook, pull line in extending from above and connect up, lower entire line away.

Sixth company to arrive will get one section of 3" hose and two men will take same to 13th floor; one man will get a hose roller and proceed to 13th floor; one man will get 6' ceiling hook and axe and proceed to 13th floor; one man will get hose rope and proceed to 13th floor. Use 6' ceiling hook to reach line extending down from 17th floor and connect to same, make hose rope fast to 3" line you are connecting about 2 feet from male coupling lower away and make other end of hose rope fast on floor of building. This takes five men.

Seventh company to arrive will get one section of 3" hose and two men will take same to 9th floor; one man will take hose roller to ninth floor; one man will take a 6' ceiling hook and axe to 9th floor, reach out with ceiling hook, pull line in extending from 13th floor, connect to same and lower entire line away. This takes four men.

The seventh company, in addition to above, which may either be a high pressure or engine company, last to arrive on fireground, will lead two 3" lines from a high pressure hydrant (if a 275 lb. pressure can be obtained from same, if not modern pumpers will have to be used to develop this pressure) to base of building connecting to a portable siamese.

There will now be several men that were not utilized in the operations of these companies and they will be ordered to get two sections of 3" hose and assemble same on ground, two men on ground for this purpose; one man to 5th floor with hose roller; one man to 5th floor with axe; one man to 5th floor with hose rope; four men on 5th floor. The hose rope will be let out from 5th floor and two sections of 3" hose pulled up, connect male end to line leading down from 29th floor and female end to siamese at base of building and your line is ready for water.

If your are leading up elevator shaft you may have to have three sections of hose running from 5th floor to street, the third section being used running through corridor of building on 1st floor.

For additional lines, additional alarms will have to be pulled, as there are very few departments which are sufficiently manned to go through these operations twice with a first alarm assignment.

In carrying hose up stairway same should be folded three times instead of rolled (The folds should be strapped on each end to facilitate carrying). Men carrying tools can alternate with men carrying hose, so as to more easily distribute the burden.

Men should also be sure to have spanners with them so as to make all connections tight.

After connections are made one man should stay on each floor where a connection has been made, so as to relay orders if necessary.

The surplus men on 25th floor will go to 29th floor and aid in extinguishing fire.

If there are six men available on ground, two men each will get a section of 3" hose and proceed with one section each to 29th floor, 21st floor and 13th floor; these sections to be used as extra sections in case of a break.

When hose ropes are made fast to a line of hose and the hose let out a little, loop of hose should extend above the knot on line, this will leave the strain on the hose ropes and not on the hose.

In case of setbacks on a building a man will have to be detailed to each setback, so as to pass the hose over the roof and down. In cases of more than one set back, or a setback of considerable distance, additional hose will have to be used.

In buildings under construction, when a line is stretched up the outside of a building, it is preferable to stretch this line as close to a stairway as possible, therefore the window or openings as near the stairway as possible should be chosen and determined before the operation begins.

It is better to stretch a line up the elevator shaft than outside of a building under construction, because at every floor landing there is usually a platform for unloading materials, etc., whereas there may not be a platform built over the entire floor, which will make it very difficult to reach the front of the building. It will also be difficult to connect lines after reaching the front and also slow up the work of operation. In case the elevator is stopped at one of the floor landings, the line will have to be detoured in on the floor at this point and down the stairway and back on the floor to elevator shaft again. This will not apply when fire originates around elevator machinery or very close to shaft because of dangerous conditions.

In cases of second and third lines, etc., they may be brought down at different points of building on outside most advantageous to operations.

In signalling for water from 29th floor to street, whistles could be used in day and night time or lights could be used at night. Orders could also be relayed by leaving one man at each point in building where connections were made, thereby keeping a line of communication from 29th floor to street and vice versa.

In figuring this operation, four engine companies, one high pressure company and two truck companies are figured to respond on first alarm, or five engine companies and two trucks.

Truck companies will procure hose lines on their arrival the same as engines companies.

In taking the line to the 5th floor for connecting up, this operation can begin as soon as there are enough surplus men available in street for same.

Second Method

Another method to get the hose up would be to roll it up, make a hose rope fast around same and pull it up rolled to each landing with a hose rope transferring same at 5th, 13th, 21st and 29th floors.

This method will do away entirely with operations on the 9th, 17th and 25th floors, but there will have to be two sections of 3" hose at the 5th, 13th, 21st and 29th, instead of one. The rest of the operation will be the same; the number of men and tools required will depend upon which method is used to get the hose up to the various floors.

If hose is pulled up in one continuous line it will be too heavy and if the sections are broken and pulled up without being rolled they will dangle in the air, break windows, injure couplings, and in case of a building under construction, may wrap around girders.

(*Continued on page* 245)

"Let 'er Burn," Said the Firemen—And It Did

Firemen of Merchantville, N. J., had a chance to enjoy a fire the way the usual bystander does. They stood by and watched a structure burn without as much as laying a hose line to stop it. Nor did anyone complain. The reason was that the old jail was thus destroyed to make room for a new building that would be erected on that site.

Handling the Boiler Shop Fire

**Do Not Overlook Available Water Supplies—
Lose No Time in Summoning Assistance.**

THE fire described in the article of the series on administration appearing in the last issue of this journal brought out again two common mistakes encountered in handling large fires. The first, failure to make use of water in private fire protection system; second, delay in calling help.

The city in which the fire occurred had a population of approximately 100,000.

The fire department consisted of eight engine companies, three truck companies, two chemical companies and one hose company.

Equipment of companies was as follows: Engine Cos. Nos. 1, 4, 5 and 6, 700 gallon triple conbination machines; Engine Cos. Nos. 2 and 3, 750 gallon triple combination; Engine Co. No. 7, 1,000 gallon combination hose and pumper; Engine Co. No. 8, 500 gallon triple combination; Truck Cos. Nos. 1 and 3, City Service Trucks; Truck Co. No. 2, aerial truck; Chemical Cos. Nos. 1 and 2, combination hose and chemical car; Hose Co. No. 1, automobile hose car carrying 2,000 feet of hose.

Response to alarms as follows: First alarm, Engine Cos. Nos. 1, 2, 3 and Truck Co. No. 1.

Second alarm, Engine Cos. Nos. 4, 5, Chemical Co. No. 1 and Truck Co. No. 2.

Third alarm, Engine Cos. Nos. 7 and 8 and Truck Co. No. 3.

The other two companies, Chemical Co. No. 2 and Hose Co. No. 1 responded only on special call.

Water Supply

The water supply in the city in which this fire occurred may be classed as very good with the exception of the outyling sections which were supplied by six and four inch mains only. The plant involved in this fire happened to be located in one of the outlying districts, and the supply was therefore of a limited nature, as will be noted by the size of mains and hydrants marked on the diagram herewith.

The Plant

The layout of the plant is shown in the diagram herewith.

The pattern shop was a two-story structure occupied on the ground floor as a pattern shop and on the second floor as pattern storage. The building was of frame construction.

Stock room alongside pattern shop was of one-story construction brick, with wooden roof.

The boiler shop and other buildings were of the height and construction as noted in the diagram.

The car shop and blacksmithy was engaged in car repairing with forges and metaltrade furnaces installed therein. Oil fuel from 400 gallon pressure tanks which were located within this building. A considerable amount of wood working on heavy material was done.

The boiler shop was engaged in repairing locomotives, boilers, steam shovels and mining equipment. It included one iron forge, motor driven furnaces, oxygen torches, acetylene generator and other boiler shop equipment.

The office building, stock room, shop, and machine shop, in the group to the west of North Fourth Street were occupied with the usual line of operations and equipment characteristic of these buildings.

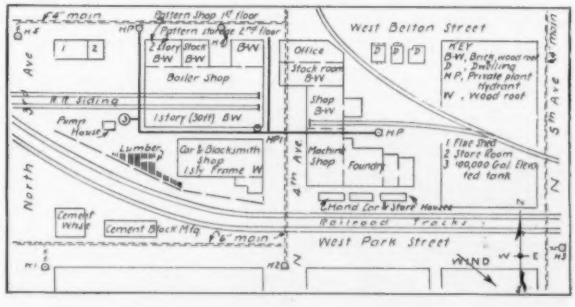
The Fire

The fire apparently started around closing time on a windy March evening (5:30 P.M.) but was not discovered until around 7 o'clock when the pattern shop was well ablaze on both the first and second floors. It is believed that a small heater used for heating shellac set fire to shellac in a metal container and the fire resulted therefrom. Upon discovery of the fire a box alarm was transmitted and a first alarm assignment as noted above responded.

Suggested Method of Handling Fire

Immediately upon arriving at fire and noting that the pattern shop is fully ablaze on both floors transit call for additional apparatus, by sending in second alarm. In view of the limited water supply in the city mains at this plant, long stretches are likely to be encountered and additional men will be needed.

Assignment of apparatus is suggested as follow: Engine Co. No. 1 at hydrant No. 4, and two lines stretched to West Belton Street side of pattern shop.



One of these lines to operate on ground floor and one on the second floor.

In view of this short stretch two 1¼ inch nozzles may be employed.

Engine Co. No. 2 on hydrant H P 1 (of the private fire protection system). One of these lines to be stretched inside boiler shop to cover interior exposures. The other line to go to roof by way of ladder and to cover exposures above as well as operate on the fire if conditions warrant. As the stretches will be short in this case, 1¼ inch nozzles can be employed, giving satisfactory range inside the boiler shop and sufficient volume for use in covering exposures.

Engine Co. No. 3 at hydrant No. 1, and two lines stretched to a pipe with holder placed directly to the west of the pattern shop. This layout, employing a 1½ inch nozzle, can do good work in covering exposures to the boiler shop and killing fire in the pattern storage building.

This arrangement accounts for five streams, one inside the boiler shop and one on the roof of the same building; two operating in the pattern shop and one heavy

stream to cover exposures and assist in killing the fire in the pattern shop.

Such a layout will be able to hold the fire until the arrival of additional apparatus. Upon arrival, Engine Co. No. 4 of second alarm to be placed at hydrant H P of the private system directly north of the foundry building. Two lines to be stretched from this engine, one to the stock building directly east of the pattern shop and one to operate from the West Belton Street side in covering exposures to the stock building as well as operating on the fire.

Thus two engines are operating on the private fire protection system which is supplied by a tank containing 100,000 gallons of water. If necessary the fire pump supplying the tank can be put in operation but the limited capacity of this pump will not help greatly in replenishing the water drawn by the two pumpers operating on the main. Two pumpers only are drawing water from the city mains so that there will not be much trouble from poor pressure or supply.

It is believed the assignment of these four engine companies can handle the situation. In the event that additional apparatus is required, the other engine company responding on the second alarm can be put into operation at hydrant No. 2 of the city main system.

It will be noted that exposures are covered on all sides, good size streams are in operation on the fire, and reserve of men and apparatus is on hand in the event of unforseen developments.

Warehouse Burns in Brooklyn

Firemen answering a five alarm fire in Jamaica, an outlying section of Brooklyn, N. Y., caused by fire in a wooden warehouse seventy years old, found that they were handicapped by

Business Section Imperilled at Wooden Warehouse Fire

poor water supply. In fact, it was a half hour before the supply was sufficient to send water as high as the third floor.

Two men eating in a nearby lunch wagon at 11 a. m., discovered smoke coming from a warehouse window. They turned in an alarm immediately. Before the apparatus arrived, the flames had spread so swiftly that the first company to arrive had to turn in a second, third, fourth and fifth and even a general borough alarm. Fire Commissioner Dorman arrived on receipt of the fifth alarm.

The building was of frame construction erected seventy years ago. At one time it was used as a distributing point for groceries on Long Island—later it was used merely for storage. Wind carried sparks for some distance around, and what with the low water pressure, it was only the good work of the firemen that prevented the fire from spreading from the point of origin.

Traffic on the "L" that served Jamaica was completely disrupted and business was at a standstill as thousands rushed to watch the fire. Dense smoke clouds hung about the building caused by the burning stock of paper and twine.

Firemen were of the opinion that they might have had little difficulty if there was sufficient water pressure.

Fire was under control by noon, although the damage was estimated at only $50,000.

Hotel Rates for I. A. F. C. Convention

The local committee in Philadelphia are busy working to make the 1928 convention of the International Association of Fire Chiefs a successful event. They have made a survey of the various hotels close to convention headquarters, and the rates during the meetings will be as follows:

First Class Hotels

Ritz Carlton Hotel, Broad and Walnut Streets. Located on opposite side of street from Headquarters.
Single room, $6.00, $7.00, $8.00. Double room, $10.00, $12.00. Parlor and double bedroom, $20.00. Parlor, double and single bedroom, $25.00.

Adelphia Hotel, 13th, below Chestnut Street. Located two squares from Headquarters.
Single room, $4.00, $4.50, $5.00, $6.00. Double room, $7.00, $8.00, $9.00, $10.00.

Hotel Walton, Broad and Locust Streets. Located one square from Headquarters.
Without bath—Single room, $2.50; double room, $4.00. With bath—Single room, $3.00; double room, $5.00. Twin beds, $7.00.

Sylvania Hotel, Locust and Juniper Streets. Located one and a half squares from Headquarters.
Large, outside single rooms, with bath, $4.00; European plan. Large, outside double rooms, with twin beds and bath, $6.00; European plan.

Bellevue-Stratford, Convention Headquarters.
Single room without bath, $4.00 to $6.00. Single room with bath, $5.00 to $9.00. Double room with bath, $8.00 and up.

Second Class Hotels

Greens Hotel, 8th and Chestnut Streets. Located seven squares from Headquarters.
Single room, without bath, $2.00 and $2.50. Double room, without bath, $3.50 and $4.00. Single room, with bath, $3.50 and $4.00. Double room, with bath, $5.00 and $6.00.

Robert Morris Hotel, 17th and Arch Streets. Located seven squares from Headquarters.
Single room, $4.00, $3.50 and $3.00. Double room, $6.00 and $5.00. All outside rooms with bath.

Hanover Hotel, 12th and Arch Streets. Located five squares from Headquarters.
Single room, $2.00 up, without bath. Double room, $3.50, without bath. Single room, $3.00, with bath. Double room, $5.00, with bath.

Vendig Hotel, 13th and Filbert Streets. Located four squares from Headquarters.
Single room, $3.00, $3.50 and $4.00, with bath. Double room, $5.00, $6.00 and $7.00, with bath.

Windsor Hotel, 1217 Filbert Street. Located five squares from Headquarters.
Single room $2.00 without bath. Double room, $3.00 without bath. Single room, $2.50 up, with bath. Double room, $4.00 up, with bath.

Lorraine Hotel, Broad and Fairmount Ave. Located eight squares from Headquarters.
Single room, $2.50 without bath. Double room, $3.50 without bath. Single room, $3.00 with bath. Double room, $5.00 with bath. Convention rates.

Panic Distorts Eyesight

Dr. Samuel J. Harris, president of the New England Association for Physical Therapeutics, declared recently that one of the causes for panic in buildings on fire is that excitement caused by the cry of "Fire" will cause a person with normal eyesight to because suddenly near sighted.

"Fear so distorts the vision that if a frightened man or woman were given an eye test he or she would be unable to see letters which were plainly visible under normal emotional conditions," said the doctor.

"The startled nerves pull at the eyeball in such a way that they change the shape of the eye and the rays of light focus at the wrong point."

HARRY BELKNAP

Tyrone, Pa., Receives New Pumper—A new pumper, purchased for $11,000, has been delivered to Tyrone, Pa.

WITH THE EDITOR

The Philadelphia Convention

Plans are moving along smoothly for the fifty-sixth annual convention of the International Association of Fire Chiefs. At the meeting of the Officers and Directors at the Bellevue-Stratford Hotel, Philadelphia, on February 28 and 29, the dates for the convention were definitely set for October 17 to 20. As the Eastern Association Fire Chiefs will hold its meeting just preceding the parent association's gathering, this practically sets apart the entire week for the chiefs' meetings.

The choice of the Bellevue-Stratford as headquarters is satisfactory, but it is unfortunate that, in spite of the best efforts of Chief Davis and the local committees, it was found impossible to secure any accommodations for the manufacturers' exhibits nearer than the Second Regiment Armory. This structure, while ample as far as floor space is concerned, suffers the great handicap of being fully a mile and a half from the headquarters hotel and the others grouped around it. What this means as a drawback to the attendance at the exhibits is realized when the experience at the Richmond Convention in 1923 is recalled. Considering the expense and trouble that the manufacturers undergo to make their showing both attractive and instructive, and their splendid cooperation with the association in the preparations for the convention, it is unfortunate that conditions make it impossible for them to get a better break.

Aside from this one drawback prospects for a banner convention are very bright. The selection of topics and speakers both show excellent choice and should prove important in the success of the gathering. The convention city is convenient of access to all parts of the country and also has a great historical appeal to all Americans, as the birth place of the nation.

In fact all early indications point to one of the biggest conventions the association has ever held.

Parking and Highway Congestion

The experiment recently inaugurated in the city of Chicago, entirely banning the parking of automobiles in certain of its more congested districts will be watched by other cities with considerable interest, including those cities which have tried it, and the results may have much to do with the future policy of other municipalities.

The problems connected with the automobile in our more populous centers are daily increasing in seriousness, particularly from the standpoint of fire protection. The quick passage of the motor fire engine through the streets of large cities is becoming more and more of a problem. One of the greatest difficulties in this connection is the habit of motorists parking their cars at the curb or extending diagonally out from it, as is provided in the regulations of some cities. That such parked cars are a serious menace and a great deterrent to the quick movement of the fire apparatus cannot be denied. If some means could be discovered by which this practice could be done away with, the problem of traffic congestion would be more than half solved.

The non-parking regulations in New York City, as far as the main arteries of travel are concerned, have been strictly enforced for a number of years, especially during the hours of heavy traffic. Some time ago an effort was made by the police department to abolish parking on the less used side streets also, but this met with such strenuous opposition from the public, that it proved ineffective. Now, in practically all side streets, driverless cars can be found by the dozens, parked along the curb and providing constant handicap from the standpoint of the fire department.

The Municipal Garage idea has been tried out in some cities, with varying success. Large private parking garages of several stories in height have been established at various sites as conveniently arranged as possible, and the plan, in some instances, has worked out with fair success.

While the prohibition of parking would in some instances work a hardship, yet, probably, in most cases, the drivers could so arrange their affairs as to avoid long parking periods or could be compelled to use private parking grounds and garages to leave their cars when out of service.

Certainly a solution to the problem is yet to be found if the fire apparatus are to have an unobstructed passage to fires.

Increased Pay or More Time Off

There have been introduced into the New York State Legislature, bills before each house providing for the submission to the people in the form of a referendum the question of increasing the minimum pay of first grade New York City firemen to $3,000 per annum. The vote on this question, if the bill becomes a law, will take place at the general election next November.

This move has much to commend it. It is distinctly a question which should be decided by the voters themselves, as in the end the money which will have to be raised for this increase in salary must be paid by them, either in the form of taxes or rent.

If the bill should be enacted into the statutes, it will also relieve the city officials from deciding the ethical

question as to whether they are justified in increasing the budget sufficiently to take care of this increase in salaries, a point which may be used in explaining the officials unwillingness to concede such an increase if the matter be left to them.

Another result would undoubtedly be a corresponding raise—much needed—in the salaries of the fire department officers. Such a raise would logically follow the increase in pay of the first class firemen, and thus the members of the department would be benefited all along the line.

It is pretty certain that, if the matter should be left to the wishes of the members of the department, they would prefer an increase of pay rather than an increase in time off, which would be made available by adoption of the three-platoon plan, such as suggested in New York a few months back.

Should the proposed measure providing for a referendum vote on the question of increase in pay become a law, it will then be up to friends of the Fire Department to use their best endeavors to acquaint the voters with the justice of this raise in salary. An active and well organized campaign for the passage of the bill might well be formulated and pushed to the utmost. If this idea is intelligently and conscientiously put across, there should be no great difficulty in obtaining a majority vote in the affirmative at the November elections.

FEBRUARY USHERED OUT BY MANY LARGE FIRES IN NEW YORK CITY

Chief Kenlon Directs Men at Multiple-Alarm Fires—Building in Construction Destroyed in Bronx—Lives Endangered at Broome Street

By WILLIAM JEROME DALY

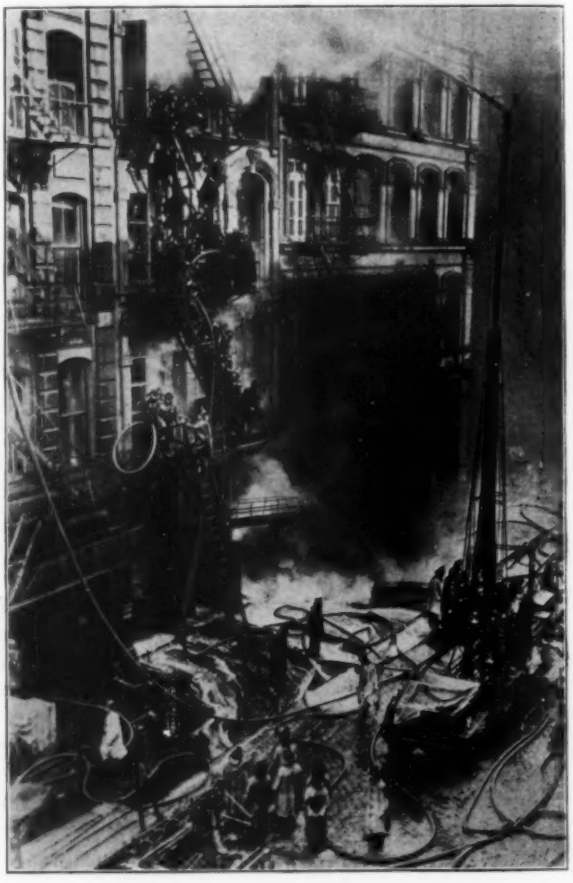
NEW YORK City had a series of fires during the closing days of February which marked an otherwise unusually quiet winter. The largest of eight extra-alarm fires was in the southwesterly part of the Borough of the Bronx, overlooking the Yankee Stadium and directly across the Harlem River from the Polo Grounds. It was at the apex of Jerome and Anderson avenues in a six story unfinished apartment house which was actually three houses into which the plaster had not as yet been applied.

About thirty hours after workmen had laid down their tools on Saturday afternoon, the fire, of undetermined origin occurred on the third floor. Its spread was so rapid that it required a fifth alarm assignment, a special call for a water tower and then special calls for three extra engine companies. It furnished a beacon surpassed only by the Sherry-Netherlands hotel last April. Boxes were pulled blocks away by excited persons. The fire gutted the upper stories of the building, embracing an area of approximately 200 x 50 feet. The front wall fell and the remainder was so precarious that building department officials pulled the balance down for safety.

On Washington's Birthday night a fourth alarm in a six story loft building at 547 Broadway, next door to the general merchandise establishment of Charles Broadway Rouss, gave Chief Kenlon and his men a stiff battle for two hours before it was under control.

The building ran through to Mercer street. It was as large as two ordinary sized buildings. The fire originated on the 2nd floor in a shirt manufactory. Seven units of the salvage corps were called to cover up. The flames swept through the building with unusual rapidity and the fire was so intense that it heated the iron shutters on the Ross store to such a point that it set off the sprinklers on the second, fourth, eighth and ninth floors. The building was tenanted mainly by dry goods and dress goods firms.

Another fire in the same locality—the old so-called "sweatshop" district occurred about mid-day on February 24th at 458 Broome street in a five story loft building. This called for a third alarm response supervised by Chief Kenlon. Fire originated on the third floor and extended to the 4th, 5th and the roof.



Two Hurt at Broome Street Fire

The method of snaking hose in and out fire escapes is the old method of bringing lines up to floors above. The latest way is to attach straps to the hose and hook them to some vantage points such as fire escapes.

It was occupied by cotton goods dealers, printers, excelsior, leather novelties, hardware, etc.

The other fires were one of fourth alarm proportions in the Jamaica district and the balance were two alarm fires.

Elizabethtown Fire Chief Resigns

After thirty years of service, Chief Henry Horst of Elizabethtown, Pa., fire department has resigned.

Chief Horst has served the company through various offices and was secretary for thirty years. He was one of the organizers of the Lancaster County Firemen's Association. He served as vice-president of that organization for many years. Chief Horst is a member of the Keystone Fire Chiefs' Association and has attended both county and state fire conventions for many years. He stepped aside to make room for a younger man.

Dangerous Matches Found

Two cases of boxes of matches suddenly bursting into flame have been reported recently, one in New Bedford and one in Mattapoisett, Mass.

A minister was reading in the living room of his home in Mattaposiett when a quantity of matches in a tin box blazed up. It is believed the New Bedford fire in matches in a china closet occurred in the same manner.

Some peculiarity in the chemical composition on the heads of the matches is believed to be the cause for spontaneous ignition.

HARRY BELKNAP.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Conducting a Membership Drive

To the Editor:

The membership committee of our association have requested that I write you regarding plans for a membership campaign which we plan to cover a period of one week. The idea of the scheme is to increase our social membership list and any information you can give us for arousing enthusiasm within the fire district and our present members will be greatly appreciated.

W. J. R.

Answer. Your question is a new one to us. It seems the more satisfactory method of building up membership in an organization such as yours would be to offer something really worth while to members.

Here is how other organizations accomplish this point: A definite social program is laid out for the year, usually including monthly features. Such features may be moving picture presentations of fire department films such as are sponsored and issued by the various organizations engaged in this work; or, the monthly meetings may be featured by prominent speakers, and such speakers are easy to secure if there is a satisfactory membership.

Social members would be entitled to attend all of these functions free of charge—the annual dues covering them. Those who are not members of the organization would have to pay an admission fee or else they may be disregarded entirely and the social meetings instead be confined to members only.

Such a plan gives the public an incentive for belonging to the organization.

On the other hand, special entertainments could be provided during the year such as minstrel shows, dances, etc., and to which the public would be invited to attend upon paying an admission fee. At these special entertainments members of the company, too, would be expected to pay.

In other words the special entertainments would make possible revenue for the company, both for regular expenses and also to help carry the cost of any of the regular monthly social affairs.

This scheme has been found to be very effective and binds the membership up into a very compact and active group. You won't have to worry about any publicity once the scheme is put into operation for members of the organization are quick to broadcast news of what they are getting as members of it. Publicity secured in this manner is far more effective than any other feasible type and is very productive of results. But it is up to your organization to plan ahead and see that these monthly meetings are interesting.

Discharge from Small Nozzles

To the Editor:

At your convenience will you please answer the following questions giving the formulas in each case.

Question 1. Two thousand feet of 1½ inch hose is stretched, using a 7/16 inch tip, with 90 pounds nozzle pressure, and 140 pounds engine pressure. What is the number of gallons discharged per minute?

Question 2. One thousand feet of 1½ inch hose is stretched, using a ⅜ inch tip and having a nozzle pressure of 84 pounds. Engine pressure is 140 pounds. What is the discharge in gallons per minute?

I shall await with interest your reply.

G. B. W.

Answer. The questions ask only for nozzle discharge. Hence all that need be known in these problems are the nozzle diameters and the nozzle pressures. Engine pressures are not required and as to whether or not 140 pounds in each case will give the nozzle pressures given in the questions, is not disputed.

In solving for discharge the formula is: discharge in gallons per minute = 29.7 × diameter × diameter × √pressure where the diameter is the diameter of the nozzle in inches and the pressure is the nozzle pressure in pounds per square inch.

Solving for discharge in the first problem, discharge = 29.7 × 7/16 × 7/16 × √90.

= 29.7 × .4375 × .4375 × 9.48

= 54 G. P. M.

The solution of the second problem is as follows:

Discharge = 29.7 × ⅜ × ⅜ × √84

= 29.7 × .375 × .375 × 9.17

= 38.3 G. P. M.

As noted above, the questions do not ask whether or not the engine pressures as given would be proper for these particular layouts and nozzle pressures; hence this point is not answered.

Use of Chimney Cleaning Powder

To the Editor:

I would appreciate very much if you will settle the following discussion:

"A" claims that when extinguishing a chimney fire with chemical powder, the powder should be thrown into the chimney at the top, after all openings below have been closed.

"B" says that the chemical powders should be thrown over the hot fire in the fire box and the door closed.

Which is right?

An early reply through your Questions and Answers page will be appreciated.

A. J. C.

Answer. "B" is correct.

The chemical powder should be thrown on a hot fire in the fire box and the door closed. The powder so thrown on the fire is transformed into gas and the gas passes on up through the chimney producing, with the heat, the chemical reaction necessary to consume the soot. Throwing the powder down the chimney would not entirely accomplish this for a lot of it would be buried in bends, particularly where the furnace or stovepipe enters the chimney at the base. Then, too, the action would be very much slower, even if there were sufficient heat in the flue gases to vaporize the powder. Instructions for the use of this powder state very specifically that the powder is to be thrown on a hot bed of fire, and the furnace door closed.

Carbon Monoxide and Carbon Dioxide

To the Editor:

I would like to know if carbon monoxide gas is lighter or heavier than air; also if carbon dioxide is heavier or lighter than air.

Dr. Archer stated that carbon monoxide is heavier than air and requires low ventilation.

I know in sewers, etc., it is heavier than air but at fires it raises as it is the product of incomplete combustion.

Is there a single answer to this question on carbon monoxide gas? If, for example, I am asked this question, to answer either "True" or "False," as to whether carbon monoxide gas is lighter than air, how should the same be answered?

While making inspections of the A. S. P. C. A., the attendant in charge told me that the Society kills cats

and dog by gas. I asked him what pressure he used and he told me to come and look over the equipment. I asked him what kind of gas and he showed me a cylinder of carbonated gas, which he said is carbon dioxide. He opened up a valve in the box and to find the height of the gas in the box he placed a lantern or match therein and by lowering the same the light went out. This indicated the height of the gas in the tank.

So by this it seems that carbon dioxide is heavier than air. If I am asked to answer the question "True" or "False"—"Is carbon dioxide heavier than air?" how would I answer it. B. H.

Answer: Carbon monoxide gas in its pure state is lighter than air.

Carbon dioxide in its pure state is heavier than air.

When Dr. Archer stated that carbon monoxide was heavier than air he had in mind carbon monoxide as encountered at ordinary fires. In this case it is mixed with other gases such as carbon dioxide and the resultant gas is heavier than air. In such a case low ventilation is usually employed where a building is fully charged with the gas and where a comparatively small amount of fire is burning. On the other hand, where there is a very strong draught due to an intense fire, overhead ventilation is usually employed.

If you are asked to state whether if carbon monoxide gas is lighter than air, you would answer this question "True."

Such a question does not take into account any mixture of other gases with carbon monoxide but refers to the gas specified alone—carbon monoxide, which is, as noted above, lighter than air.

If asked to answer the question whether carbon dioxide is heavier than air, this question should be answered "True."

Effects of Nitric Acid

To the Editor:

I will appreciate it very much if you will give me a few statistics on nitric acid. By this I mean the effects it has on firemen fighting a fire in a building where nitric acid is stored.

Of course we compel all manufacturers using this acid to keep it in a vault, but I have never had any experience with it and would like to get whatever facts on it that I can. H. P. C.

Answer: Nitric acid produces two effects. In the first place, in coming in contact with flesh it produces a burn very much the same as a scald. The second effect is from the gas generated by nitric acid. Nitric acid coming in contact with organic substances throws off a heavy yellowish gas which when inhaled is extremely dangerous. Fire department experience shows that nitric acid fumes, when inhaled, may cause death several days after inhaling. In one instance a large central western department lost four men through exposure to nitric acid fumes. The men did not notice any severe reaction following inhaling the fumes with smoke, and apparently felt but slightly nauseated for the first couple of days. On the fourth day, however, the four of them died.

The use of liberal quantities of water for preventing generation of fumes, together with thorough ventilation are necessary. See that the men protect their hands against contact with the acid. Handling of hose which has been dragged along the floor in such a plant as you describe is a dangerous process particularly if the men are not wearing gloves. Naturally the acid has a very damaging effect on the cotton jacket of the hose, and a great number of cases of hose being destroyed through contact with acid are on record.

Woman Operator Controls Fire Alarm System in Canton, Ohio

The fire and police signal systems of Canton, Ohio, are housed in one building, an addition to which has just been completed. The recording sets are so lined up as to permit the signals to be read easily by the woman operator from her position at the police desk. Space has been provided for future growth. The recording set in the foreground is an extra one which is used to record any alarms that might come in from the Timken Roller Bearings Company which has a separate Gamewell system of its own. The office is semi-automatic but is operated manually most of the time. The primary duty of the women operators is to take care of the fire alarms and then the police signalling system. They work on six-hour shifts. The signalling systems have been installed by the Gamewell Company.

Capacity of Plunge

To the Editor:

Please send me formula for the following problem as I cannot find it in any of your books: A plunge is 60 x 20 feet, 3 feet depth at one end and 7 feet at the other. What quantity of water will it contain when filled to the depths given. M. J. L.

Answer. To find the volume of a plunge when the depth at one end is 3 feet and at the other end is 7 feet, with a width of 20 feet and a length of 60 feet, we proceed as follows: Average the depth at both ends by adding 3 to 7 and dividing by 2, giving us 5 feet average depth for the whole plunge. Then the volume equals $5 \times 60 \times 20$ or 6,000 cubic feet.

Where Full Pay Is Allowed for Sickness

To the Editor:

As a reader of FIRE ENGINEERING, I will appreciate very much if you will give me the names of cities allowing full pay for firemen while off duty on account of injury or sickness. C. M. C.

Answer: The following cities allow full pay for firemen while off duty on account of injury or sickness:

New York, N. Y.; Philadelphia, Pa.; Cleveland, O.; Baltimore, Md.; Los Angeles, Cal.; San Francisco, Cal.; Milwaukee, Wis.; Newark, N. J.; New Orleans, La.; Kansas City, Mo.; Rochester, N. Y.; Toledo, O.; Akron, O.; St. Paul, Minn.; San Antonio, Tex.; Syracuse, N. Y.; Dayton, O.; Houston, Tex.; Youngstown, O.; Scranton, Pa.; Salt Lake City, Utah; Wilmington, Del.; Cambridge, Mass.; Yonkers, N. Y.; Tulsa, Okla.; Spokane, Wash.; Oklahoma, Okla.; Utica, N. Y.; Somerville, Mass.; San Diego, Cal.; Jacksonville, Fla.; Schenectady, N. Y.; Knoxville, Tenn.; Bayonne, N. J.; Manchester, N. H.; Peoria, Ill.; St. Joseph, Mo.; Sioux City, Iowa; Portland, Me.; Hamtramck, Mich.; Chicago, Ill.; Detroit, Mich.; St. Louis, Mo.; Boston, Mass.; Pittsburgh, Pa.; Buffalo, N. Y.; Washington, D. C.; Minneapolis, Minn.; Cincinnati, O.; Indianapolis, Ind.; Jersey City, N. J.; Denver, Colo.; Columbus, O.; Oakland, Cal.; Richmond, Va.; Memphis, Tenn.; Norfolk, Va.; Bridgeport, Conn.; Fort Worth, Tex.; Des Moines, Iowa; Flint, Mich.; Albany, N. Y.; Erie, Pa.; Duluth, Minn.; Elizabeth, N. J.; Canton, O.; Lynn, Mass.; Waterbury, Conn.; El Paso, Tex.; Fort Wayne, Ind.; Lawrence, Mass.; Evansville, Ind.; Allentown, Pa.; Wichita, Kan.; Long Beach, Cal.; South Bend, Ind.; Wilkes Barre, Pa.; Rockford, Ill.; Gary, Ind.; Troy, N. Y.; Little Rock, Ark.; Binghamton, N. Y.; Hoboken, N. J.; Racine, Wis.; Highland Park, Mich.; Bethlehem, Pa.; Lincoln, Nebr.; Quincy, Mass.; Portsmouth, Va.; Roanoke, Va.; Shreveport, La.; Lancaster, Pa.; Topeka, Kan.; Atlantic City, N. J.; Wichita Falls, Tex.; Malden, Mass.; Cedar Rapids, Ia.; Charleston, S. C.; Pawtucket, R. I.; Passaic, N. J.; Brockton, Mass.; Springfield, Ill.; Holyoke, Mass.; Winston-Salem, N. C.; East Orange, N. J.; Covington, Ky.; Jackson, Mich.; Niagara Falls, N. Y.; Fresno, Cal.; Davenport, Ia.; Kalamazoo, Mich.; Newton, Mass.; Charlotte, N. C.

S. Glens Falls, N. Y., Wants Pumper—South Glens Falls, N. Y., may petition the officials for the purchase of a new pumper.

Windshields on Fire Trucks

To the Editor:

For some time I have had heated arguments with members of our department as to why windshields are not used on the standard makes of fire trucks. Can you answer this for me? M. D.

Answer: You ask why the standard makes of fire trucks do not use windshields. About the only answer to that is that the glass windshield imposes upon the men an additional hazard. Just how serious this hazard is cannot be said. The fact that many of the European manufacturers of motor fire trucks have windshields placed on their machines indicates that the hazard is not as bad as some apparently think it is.

Static Pressure

To the Editor:

Kindly solve the following questions which were asked at a recent examination for lieutenants.

Question. (a) How would you find pressure in square inches due head?

(b) How could you find height of standpipe if pressure in square was given at outlet?

I didn't get this "due head," and will appreciate an explanation of these questions. E. J. B.

Answer: Apparently you have interpreted the first question wrong. The question is: "How would you find pressure in square inches due head?"

This question might be worded as follows: How would you find the pressure in pounds per square inch where the head (height of water) is given in feet?

That is apparently what the examiner was asking. He gave you the head and asked you what pressure it represented in pounds per square inch. On that point the following may be said: For every foot depth, or head, you will have a pressure of 0.434 pounds per square inch. If the depth (or head) should be 10 feet then the pressure would be 10 x 0.434, 4.34 pounds.

The second question "How could you find height of standpipe if pressure in square was given at outlet" should be read as follows: "How could you find height of standpipe if pressure in pounds per square inch is given at the oulet?" Considering this question you will have to assume that the standpipe is completely filled with water, for it is the depth of the water and not the height of the standpipe that determines the pressure. Every foot elevation of water gives you a pressure of 0.434 pounds per square inch. If the pounds pressure per square inch is given you, then it is only necessary to divide this pressure by 0.434 giving you the height in feet (head of water in feet) creating this pressure.

Use of Extinguisher on High Tension Lines

To the Editor:

We have installed at several of our substations and generating stations, extinguishers for fire prevention. The voltage in the stations varies between 2300 volts and 4000 volts and transformers outside of the station carry voltages as high as 75,000 volts. We are anxious to obtain data regarding the use of the 2½ gallon soda and acid extinguisher in case of fire that may occur in the electrical equipment carrying the voltages as stated above.

Please advise the limits to which such extinguishers may be put in case of fires in electrical equipment, i. e., the maximum amount of voltage in which it would be safe for their use. E. C. B.

Answer: Do not use soda and acid extinguishers on high tension electrical apparatus.

The discharge from a soda and acid extinguisher contains alkali as well as acid, and is an excellent conductor of electricity and there would be extreme danger to the men operating the extinguishers on electrical apparatus at close range.

In view of the fact that the hands of a person operating the extinguisher are apt to be moist, thus making excellent electrical contact between the extinguisher and the body of the party operating it, contact of the stream with any high tension apparatus would result in a very severe shock, if not death.

It is estimated that it requires but one-tenth of an ampere to kill a person so that with the high conductivity of the stream and good contact through the body, a voltage as low as 1,000 volts might prove fatal.

Results of Submergence

To the Editor:

A lengthy discussion was held at our quarters pertaining to the condition of a man who drowns, and a man who was dead previous to being deposited in water. The question is:

"A" states that a man drowning does not have water in lungs when rescued.

"B" states that said man does have water in lungs.

Who is right?

"A" also states that a dead man deposited in water will have water in lungs when recovered.

"B" says he will not have water in lungs.

Who is right in this case?

Your early reply will be appreciated. S. H.

Answer: "B" is correct in the first question. A man who is drowning, or had drowned, would have water in his lungs.

In the second question "B" is again correct for when the body of a man is submerged, subsequent to the death of the man, no appreciable water will enter the lungs. This is one of the methods employed by coroners to determine cause of death in the case where bodies are found in the water.

Department Relieves Asthma Sufferer

When efforts to obtain in a physician were fruitless, a man called the Chicago fire department to respond with the pulmotor to relieve his wife who was suffering from asthma.

For three and one-half hours, firemen pumped oxygen into the woman's lungs before she was believed out of danger. And when the men left, she slept for the first time in ninety-six hours. Doctors who called later said that this was the first time in their knowledge that a pulmotor was used to treat critical asthma.

Lewistown, Pa., Firemen Hold Dinner—The Henderson company in Lewistown, Pa., held their twenty-sixth annual oyster supper at which three hundred guests were present.

How to Protect the Coal Pile from Fire

One of the serious hazards of the factory is the coal pile. Bituminous coal is particularly susceptible to spontaneous ignition through overheating, and the instruments shown above give a warning signal when the temperature approaches the danger point in the coal pile. The dials show temperatures at three different depths.

LARGE PART OF BUSINESS AREA IN PEEKSKILL, N. Y., DESTROYED

Two Buildings, Including Several Stores, Are Wiped Out—Neighboring Communities Rush Aid—Total Damage Estimated at $280,000

A SECTION of the business section in Peekskill, N. Y., was destroyed by a fire from an unknown cause that started in the pajama factory of M. Komski and Company and which spread to seven retail establishments.

The pajama factory building covered an area of 7,300 square feet and the Kelwynn building which was also destroyed, 18,800 square feet. The buildings were built sixteen years ago of brick and frame construction with brick partition walls. Neither building had sprinkler protection.

Fire was discovered in the rear of the Komski place and an alarm sounded at 3 a. m. When the first company arrived, the first building was completely in flames and fire was entering the adjoining building through window openings. In this structure was a block of nine stores. Strong winds from the Hudson river aided in spreading the fire.

Two hundred firemen responded with two Pope-Hartford chemical and hose cars, one Pierce-Arrow fire patrol, one Seagrave 75-foot aerial ladder, one Seagrave 1000-gallon pumper, two American-La France 750-gallon pumpers and one Larrabee 550-gallon pumper.

Eight fire hydrants were available spaced anywheres from

A Large Section of Peekskill's Business Section Was Wiped Out by Fire of Undetermined Origin

fifty to 250 feet apart. The hydrants were fed from 6-, 12-, and 16-inch mains so that there was no dearth of water. There was an average pressure of 110 pounds at the hydrants.

At one time, there were as many as eleven streams in use operating through 1⅛-inch nozzles. The lines were fed by a gravity water system.

Two alarms were turned and aid was requested from Montrose, Ossining, Croton, Mohegan and Lake Mahopac. The fire burned for three hours but luckily no one was hurt nor were any lives lost.

The Kelwynn building was of very light construction with no fire resisting partition between the six stores. Offices above the stores were also destroyed. The loss on the buildings was estimated at $138,000 and the loss on contents at $142,000 although many newspapers gave the total loss at $1,000,000.

Roads leading to Peekskill were choked with automobiles headed for the fire. It was difficult to keep traffic moving.

At one time the roof of the New York Telephone Exchange caught fire but this blaze was quickly extinguished.

Henry Ford Still Adding to Old Fire Relics—It is reported that Henry Ford is negotiating for the purchase of an old fire engine at Jaffrey, N. H., for an addition to his Museum of Antiquities.

Mt. Pleasant, Ia., Against Wooden Shingles—An ordinance has just been passed in Mt. Pleasant, Ia., that prohibits the use of wooden shingles within the city limits. The sale of dynamite within these limits is also prohibited.

Church Damaged in Brockton, Mass.

The Waldo Congregational Church on North Main Street in Brockton, Mass., was damaged to the extent of $25,000 in a fire which started under the roof and is believed to have been caused by defective wiring.

Brockton firemen fought a hard battle in bitterly cold weather.

Ruins of Church That Caused a General Alarm

The first warning of the fire came in a telephone call to fire alarm headquarters from a person living in the rear of the church. An alarm was sounded from the box at the corner of North Main and Albion Streets and upon the arrival of Deputy Chief John Murphy, a second alarm was ordered. This brought

---

Fifteen Families Flee When Building Being Constructed in Bronx, N. Y., Burns During Night

Fifteen families from nearby apartment buildings were forced to leave their homes and rush out into the cold during the night when fire destroyed a large double apartment building just being completed in the Bronx, New York City. The photograph was taken after part of the wall had fallen. Damage was estimated at $550,000.

Chief William F. Daley to the scene and he sounded a third and general alarm.

A stiff wind fanned the flames, and spray from hose lines froze on the walls of the edifice and on the coats of the firemen. A squad of hosemen working a line inside the church had a narrow escape when a large section of the roof fell in.

The roofs of two nearby residences took fire from sparks, but these blazes were extinguished before any serious damage was caused.

The stained glass windows in the church escaped damage. The firemen worked at the blaze for more than five hours. Neighbors served coffee to the hosemen and laddermen who suffered severely from the cold.

S. Boston Has 4-Alarm Church Fire

Four alarms were sounded in the late afternoon, last month, for a spectacular fire that swept through the large frame edifice of the South Baptist Church at the corner of L and East Fourth Street, South Boston, Mass.

Morse Gun Stream Fighting Church Fire

Chief Daniel F. Sennott, of the Boston Fire Department, was in charge of department operations and ordered a fourth alarm upon his arrival. District Chief Michael J. Teehan was the first officer to arrive and he ordered the second and third alarms.

The flames traveled upwards between the walls of the church and soon broke through the roof and belfry. Six Morse wagon guns were used from the front and side. Hose lines were taken in the rear door and operated inside the church until the men were driven out. A portion of the ceiling fell. Lines were taken to the roofs of nearby houses and to a yard at the rear of the church. When the roofs of several houses on Emerson street ignited from flying embers, wagon gun streams were turned into the air and the spray carried on the wind soon extinguished these slight fires. One fireman suffered severely from smoke and was carried out from the church unconscious and sent to a hospital. Overhead wires and trees interfered with use of ladders and prevented a water tower from being brought into play.

The amount of 2½-inch hose used was 12,250 feet. Orders were given to the Metropolitan water supply pumping station to increase the water pressure in the mains. Four lines and a 40-foot ladder were used inside the church, but the fire which originated in a closet had spread in concealed spaces and could not be checked.

A large crowd collected to watch the fire which lit up the sky for an hour. There was a stiff wind blowing and the temperature was low so that ice formed from the spray of the hose lines.

The first alarm was sounded at 4:55 p. m. The second was at 5:00, the third at 5:04, and the fourth at 5:23. Power was ordered shut off from trolley wires on both Fourth and L streets.

Both Lowry and post hydrants were used. Size of nozzles on the mobile lines was 1¼-inch and on the wagon guns 1⅜-inch and 1⅝-inch. Average pressure at hydrants was 45 pounds.

Chief Sennott estimated the damage at $65,000. A large bell weighing about two tons threatened to crash to the street when a portion of the belfry collapsed.

The response of apparatus on the various alarms was as follows: first alarm—Engines 2, 11, and 43; ladders 19 and 5, district chief 6; second alarm—engines 15, 3, 39, and 7; ladders 20 and 18, water tower 3, district chief 3, deputy chief 2; third alarm—engines 26, 33, 22, and 10; ladder 3, rescue company 1, district chief 7, chief of department; fourth alarm—engines 13, 17, 12, and 33, water tower 2, and deputy chief of division 1. The response also included the motor wagons of the Boston Protective Department, car of the Boston Consolidated Gas Company, search-light wagon, ambulances, fuel supply wagon, and emergency truck of the Salvation Army.

During the progress of the blaze an alarm was sounded for a small fire near Broadway and E street, South Boston, which was quickly extinguished by the "covering in" apparatus.

Within the space of a few days small fires of incendiary nature occurred in a number of other South Boston churches.

HARRY BELKNAP

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending March 9.

TYNDALL, S. D.—Fair dept. store and adj. property	50
PAWTUCKET, R. I.—Smith block damaged	65
SPRINGFIELD, MASS.—One story business block	50
SUDLERSVILLE, MD.—American Stores Co. and adj. property	80
DETROIT, MICH.—Public Light Comm. substation	40
CHICAGO, ILL.—313 N. Sangamon St. damaged	80
PERTH AMBOY, N. J.—West section, Ford Porcelain Works	125
CALABOGIE, ONT.—Black Donald Grainte mine damaged	125
HARRISON, ARK.—Incubator house, Gaitner Poultry Farm	30
PETERSBURG, IND.—Business property damaged	80
EVANSVILLE, IND.—Plant of Evansville Bag Co. damaged	40
JOHNSON CITY, TENN.—Lacquering tanks at Guinn Mfg. plant	25
OGDEN, UTAH.—Residence of Don Maguire, 25th St.	25
ASBURY PARK, N. J.—Ocean Garage, St. James Place	25
BRUNSWICK, GA.—Millican Building destroyed	65
PEEKSKILL, N. Y.—Factory of M. Komiskl & Co. and adj bldgs.	280
BATTLE CREEK, MICH.—Factory of Ralston Purina Co.	250

Many Girls Escape From Bad Chicago Fire

A four-story building occupied by several concerns and in which over one hundred girls were employed, was destroyed by one of the most spectacular blazes in Chicago. The girls were forced to flee down flaming stairways to safety. One man who had returned to his office to obtain some papers, was trapped by the blaze. He hung from the window sill for some minutes and a net was spread underneath. He was unhurt by the jump, but was seriously affected by smoke.

DOTHAN, ALA.—Plant of Dothan Coffin & Casket Co..... 30
BILOXI, MISS.—Dwellings on beach front destroyed..... 25
BINGHAMTON, N. Y.—Plant of Binghamton Birch Co. destroyed 200
PORT HOPE, ONT.—Trinity College practically destroyed.... 450
OLIVER, MICH.—Parsons Hall, Olivet College..... 80
PHILADELPHIA, PA.—Bldg. of Northern Storage & Warehouse Co..... 40
AMHERST, MASS.—Albert Nash bldg. destroyed..... 100
FORT WORTH, TEX.—Plant of Dunn-Locke Mfg. Co..... 25
DUNKIRK, N. Y.—Grace English Lutheran Church..... 30
LOGAN, W. VA.—Chafin & Bland bldg., also adj. property.... 50
IRENE, TEX.—Business property destroyed..... 30
PLAINS, PA.—Three-story brick block destroyed..... 50
HIALEAH, FLA.—La Vida Club destroyed..... 50
LORAINE, OHIO.—Stores in business district..... 250
SANDWICH, ONT.—Plant of Canadian Salt Co..... 65
KITTANNING, Pa.—Fire in business district..... 600
ROSELYN PLACE, N. J.—Are Pottery Works, Inc..... 25
MONTGOMERY, ALA.—Fire and police station in City Hall.. 50
PHILADELPHIA, PA.—Coal yard of C. A. Baldi Bros..... 25
WABASH, IND.—Mikesel Asbestos plant Damaged..... 25
PRINCETON, MASS.—Dwelling of Mrs. Ida Hopkins..... 25
INDEPENDENCE, IA.—Property of West Side Lumber Co.... 40
SCOBEY, MONT.—Shop of Battleson Co. damaged..... 50
LEBANON, PA.—H. L. James music store damaged..... 25
ALBANY, N. Y.—Cap establishment, downtown section..... 40
GLOVERSVILLE, N. Y.—Pickard Dept. store destroyed..... 45
WIMBLETON, N. DAK.—Consolidated School destroyed..... 25
ST. JOHN, N. B.—Factory of Murray & Gregory, Ltd..... 40
NASHVILLE, TENN.—Nashville Iron & Metal Works..... 25
THOMASVILLE, GA.—Residence of H. K. Devereaux..... 80
CLINTON, MD.—Bldgs. on Auth farm near Redd's Corner.... 50
MEMPHIS, TENN.—Grain elevator of J. W. Dial..... 25
VERNON, TEX.—Carnegie Library damaged..... 25
SHELBYVILLE, IND.—Plant of Fame Canning Co. destroyed. 400
CLEVELAND, OHIO.—Cleveland Hardwood Products Co..... 50
CHICAGO, ILL.—Working Women's Home, Langley Ave..... 80
NEW YORK, N. Y.—Metropolitan Temple destroyed..... 100
MEDWAY, MASS.—Foresters' bldg. and adj. property..... 25
BENTON, ILL.—Swofford bldg. destroyed..... 70
POLO, ILL.—Evangelical Lutheran Church destroyed..... 80
HANNIBAL, MO.—Bldg. occupied by Koslow Furniture Co.... 50
WEST POINT, MISS.—Lynch High School destroyed..... 25
SAULT STE MARIE, MICH.—Cook bldg destroyed..... 25
SOUTH BEND, IND.— Chain store bldg. damaged..... 25
NASHVILLE, TENN.—H. G. Hill store, adj. property..... 250
ZANESVILLE, OHIO.— Plant of Empire Floor & Wall Tile Co. 500

Week Ending March 16

TRAER, IOWA.—Property of L. A. Page Lumber Co..... 25
DOYLESTOWN, PA.—Store and garage damaged..... 50
KANSAS CITY, MO.—Bldg. occupied by Kansas City Power Co. 40
PHILADELPHIA, PA.—Lewis Weiner garage damaged..... 25
EAGLE, WISC.—Junior High School bldg. destroyed..... 25
FORT ATCHISON, WISC.—Methodist Church destroyed..... 25
AMSTERDAM, N. Y.—Business property, E. Main St..... 30
SPARTANBURG, S. C.—Standard Cloak Co. and adj. property. 40
NORRIS CITY, ILL.—Property of Firebrand Fuel Co..... 110
KINNETT SQUARE, PA.—Property owned by John Shapiro.. 25
CHICOUTIMI, QUE.—The Kenogami Company plant..... 80
TORRINGTON, CONN.—Burns bldg. and adj. property..... 25
HAVERHILL, MASS.—First Presbyterian Church damaged.... 25
NORTH PLAINFIELD, N. J.—Residence of Arthur Hoffeimer.. 60
CLEVELAND, OHIO.—Crouch Store and bldg. destroyed..... 80
CHARLESTON, ILL.—Drug store and adj. bldgs..... 40
RAPID CITY, S. D.—B. H. & W. railroad shops..... 160
LEONARD, TEX.—Property of Lyon-Gray Lumber Co..... 70
TAMPA, FLA.—Garage of Tampa Sand & Material Co..... 50
CANTON, OHIO.—Hercules Mfg. Co. plant..... 150
BROOKLYN, N. Y.—Eden Musee at Coney Island destroyed.... 40
BALTIMORE, MD.—Hambleton mansion, Green Spring Valley.. 110
WILDWOOD, N. J.—Biltmore, Towers and Willows Hotels.... 165
SPRINGDALE, ARK.—Three business establishments..... 25
OSAWATOMIE, KANS.—Bldg. of Kansas State Hospital..... 40
SANFORD, N. C.—Makepeace Box & Lumber Co..... 150
FAIRMONT, MINN.—Valhalla Pavillion, Lake Chetek..... 40
PHOENIX, ARIZ.—Bldgs. in business district..... 200
NEWPORT, KY.—Malt plant of Geo. Wiedemann..... 80
FRANKSTON, TEX.—Frankston High School bldg..... 30
ELMIRA, N. Y.—Stores & residences, Bentley Creek..... 25
HOMESTEAD, PA.—St. Elias Magyar Greek Catholic Church.. 65
MOSCOW MILLS, MO.—Business establishments damaged.... 65
DOWNINGTOWN, PA.—Pennsylvania House Hotel damaged.. 25
CANORA, SASK.—Imperial Hotel & Burrows Lumber Yd..... 65
CHICAGO, ILL.—Manhattan Electric Co. bldg..... 400
JEFFERSON CITY, Mo.—Missouri Paper Box Factory..... 25
LYNN, MASS.—Plant of Mass. Electric Mfg. Co..... 25
MIDLAND, TEX.—Tanks of Magnolia Oil Co. damaged..... 400
TRENTON, N. J.—Plant of Trenton Shirt Mfg. Co..... 100
CINCINNATI, O.—Garage of Schulze Baking Co..... 40
IMBODEN, VA.—Stonega Coal & Coke Co's commissary..... 50
BAY ST. LOUIS, MISS.—L. & N. R. R. depot..... 60
PRESTONSBURG, KY.—Floyd Co. Times bldg. & adj. property.. 80
AUGUSTA, ME.—Store of Malcolm & Dyer damaged..... 25
POMONA, CAL.—Wright Bros. & Rice bldg., adj. property.... 100
NEW YORK, N. Y.—Jackson bldg., E. 18th St..... 80
FRESNO, CALIF.—Property of Ernest Wilson Co..... 75
NEW YORK, N. Y.—Residence of Dr. R. J. Forhan..... 75
AVISTON, ILL.—Plant of Aviation Milk Condensing Co..... 50

Fifty Men Transferred in Everett, Mass.—Fifty officers and men in Everett, Mass., fire department have been transferred by direction of Albert J. Cahill, fire commissioner and Chief Philip E. Ham.

Camden, N. J., to Invite Bids—The commission of Camden, N. J., has invited bids for new fire apparatus, and sundry supplies. The fire equipment will include two combination chemical and hose motor cars and two triple combination pumping chemical and hose equipments.

Who Has the Oldest Fire Engine?

Many fire departments have fire apparatus that dates back to the early days of fire-fighting. In the February 22 issue there was a picture of a hand pump dating back to 1810 and said to be the second oldest fire engine in the United States. Who has the oldest fire engine? A correspondent of this Journal has asked for information on this subject, and we will be glad to print any information from readers.

Rhode Island Chiefs Hold Meeting

Since the organization of the Fire Chiefs' Club of Rhode Island in January, 1928, this new chiefs group has had a very healthy growth. It was organized with fifty-five chiefs and at the February meeting the total membership was 112.

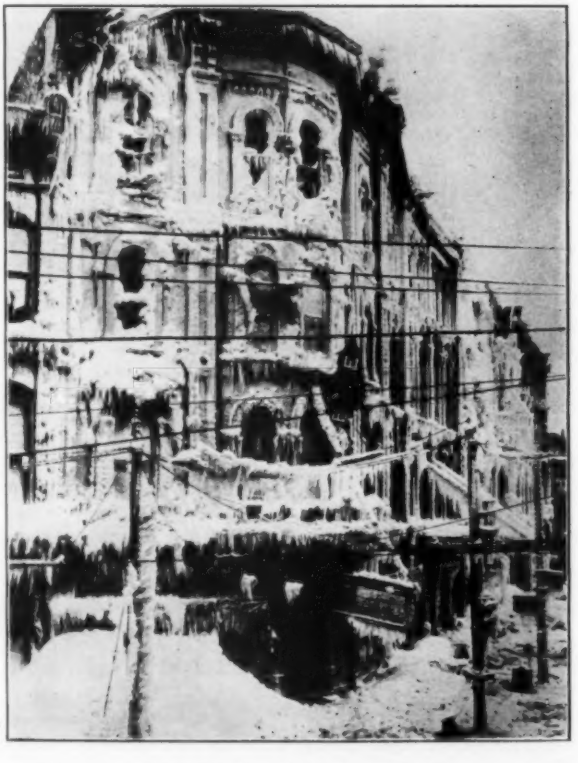
At this meeting, the speakers were John P. Crowe, deputy fire warden of the commonwealth of Massachusetts and Mr. Hutchins of the National Board of Fire Underwriters.

The March meeting was held in Providence on March 8. There was interesting discussion on several problems submitted by members of the club. Following the meeting, the chiefs were invited to a chowder supper.

Chief Frank Charlesworth of Providence, R. I., is president; Chief A. J. Cote of Woonsocket, vice-president; Chief Elmer A. Capwell, Anthony, second vice-president; Chief Thomas V. Daley, Pascoag, secretary; and Chief Clarence Cook of Harrisville, treasurer.

Correction

In the January 11 issue, under the heading of "What's Burning," there was a report of a $40,000 church fire in Sanford, Fla. The fire broke out in a negro church about twenty years old, valued at $2,000, and spread to an adjoining house valued at $1,500. The loss to the church was $2,000 and to the dwelling $100.



Lockport Fire Does Big Damage

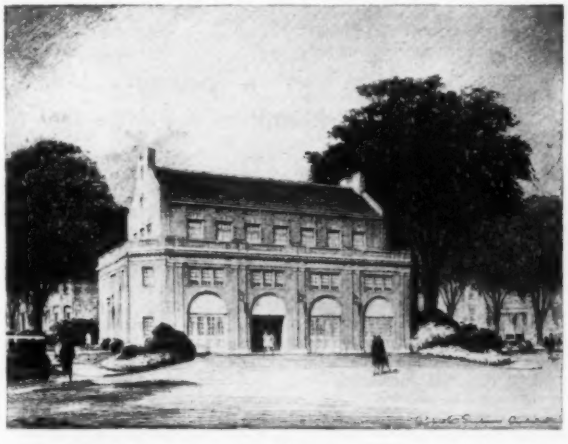
Lockport, N. Y., suffered from a fire that caused a $1,000,000 loss in the business section. Firemen had to fight the fire in subzero weather. Apparatus from neighboring municipalities were called upon for assistance. The fire was not declared under control until eighteen hours after it was first discovered. Firemen can readily understand the handicaps that the fire-fighters had to contend with.

CENTRAL FIRE HOUSE TO BE ERECTED IN MIDDLETOWN, N. Y.

Building to be Built on Present Station Location at Cost of $125,000—To House Four Volunteer Companies—One Room for Each

OLD time members of the McQoid-Monhagen companies will have little to recall the by-gone days of fire-fighting. On the site that once held their fire station will be erected a three-story brick central fire house at an estimated cost of $125,000. The new building has been designed by Robert R. Graham, local architect.

The design is such as to facilitate the housing of four separate volunteer companies with one room assigned to each. At some later date, if the city should decide to have a paid department, the station can be altered with very few changes, to meet the changed conditions.



Central Fire Station for Middletown, N. Y., Designed by Robert R. Graham, Architect

Georgia style architecture has been used. The station will be constructed of Harvard trimmed faced brick with limestone. There are granite base courses and entrance steps.

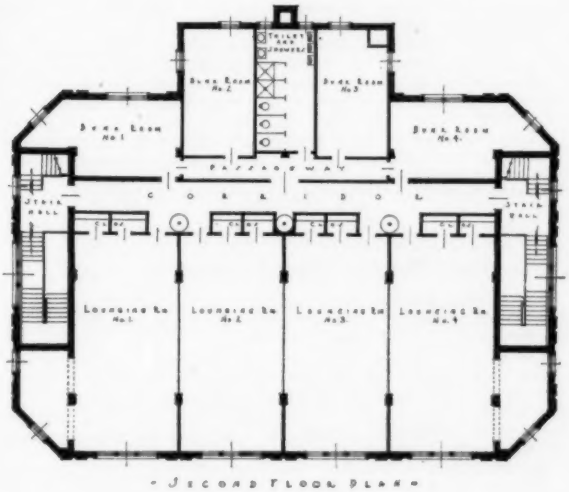
The basement provides space for heating and ventilating apparatus and for fuel. A battery room is directly below the fire alarm room on the first floor. In addition to these rooms, four large storage rooms have been provided, one for each company.

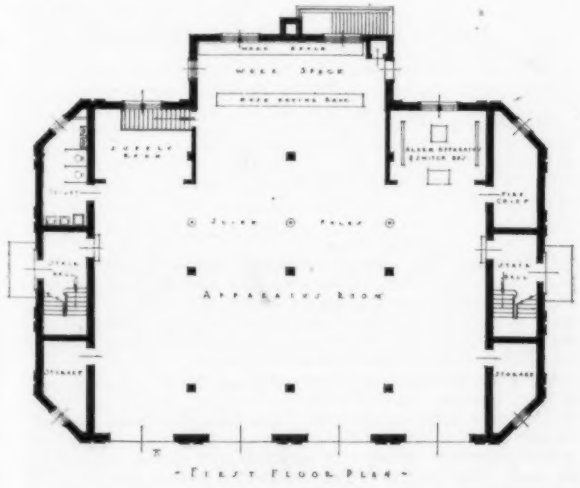
Most of the space on the first floor is for the apparatus room. The walls of this room will be of light buff brick. A floor drainage system is arranged to make it easy to clean apparatus. There are several outlets for hot and cold water. At the rear of this room are the supply and fire alarm apparatus room. In between is provided space for a work bench and a hose drying rack. At the left is a large toilet while the fire chief's office will be on the opposite side near the fire alarm apparatus. There are two storage rooms on this floor.

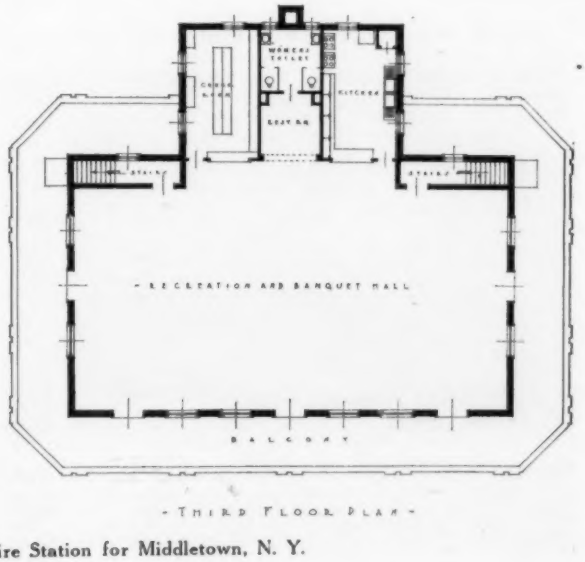
A large stairway on both sides of the building leads to the main corridor on the second floor. The space at the front of the building is divided into four lounging rooms for each of the companies. These are separated with folding doors and arranged so that they can be opened up to provide larger space for the companies on special occasions. At the rear of the building are four large separate bunk rooms with a spacious shower and toilet between. The bunk rooms have separate entrances to the shower room without entering the main corridor. A mechanical ventilating system will ventilate the lounging rooms and bunk rooms.

The entire top floor is given over to one large drill hall and banquet room, with check room, ladies' rest room and toilet adjacent and a thoroughly equipped and modern kitchen and dumbwaiter service to the first floor. The building sets back at the third floor level and space thus provided forms a balcony opening direct from this floor and extends completely around the building.

All trim throughout the building will be of metal. The main corridors and stair halls will have terrazzo floor. The lounging rooms will have maple floors, plaster walls and cornices. The banquet hall will have a high ceiling opening through to the







Floor Plans of the New Central Fire Station for Middletown, N. Y.

roof. Toilets throughout will have tile floors, marble wainscoting and marble toilet stalls.

The heating plant is a thoroughly modern low pressure vacuum heating system laid out to burn buckwheat coal. The boiler will be equipped with blowers.

Blaisdell Appointed Honolulu Chief

William Wallace Blaisdell, assistant chief at Honolulu, T. H., has been appointed head of the department to fill the vacancy caused by the death of Chief Charles H. Thurston. H. A. Smith, second assistant chief will be promoted to first assistant chief.

The board of supervisors adopted the following resolution on the death of Chief Thurston:

"Whereas, Charles Henry Thurston, who first joined the fire department of the city and county of Honolulu as hoseman on January 1, 1897, and who later, through diligence and merit became assistant chief of the fire department on May 1, 1900, and chief of the fire department on June 15, 1901, respectively; and

"Whereas, Charles Henry Thurston, during his thirty-one years of membership in the fire department, was at all times keenly interested in greater protection of private and public property from fire, resulting in a vast development and improvement of the fire department by the complete motorizing of the equipment, the construction of modern and appropriate fire stations and in keeping the personnel of the fire department highly trained and efficiently prepared; and

"Whereas, Charles Henry Thurston's service to the community as chief of the fire department ended on February 18, 1928, when he was removed by death;

"Now, therefore be it resolved that the board of supervisors of the city and county of Honolulu express the profound sorrow of the community for its loss of an esteemed and able public official, and the appreciation of the community for the efficient and conscientious service rendered it by Charles Henry Thurston;

"That this resolution be spread upon the rolls of the board of supervisors of the city and county of Honolulu for the purpose of permanently recording the memory of Charles Henry Thurston as that of an esteemed and public spirited citizen and official."

Date Set for Illinois Short Course

The Fourth Annual Short Course of Fire Prevention, Control and Extinguishment will be held at the University of Illinois, Champaign-Urbana, Ill., on June 19–22.

The course is given by the Illinois Firemen's Association and at this year's gathering, they will dedicate an $11,000 drill tower. Fire department evolutions will be taught by members of the Chicago fire department. All attending the course will practice the different evolutions adopted by the association as standard for the state.

An attendance of close to one thousand firemen is expected.

Roy W. Alsip of Champaign, Ill., is secretary of the Illinois Firemen's Association. The annual convention will be held in La Salle, Ill., on September 11–13.

Amherst, Mass., to Have New Station—Plans are being made for a new fire station in Amherst, Mass.

Greenburg, N. Y., Receives New Pumper—An Ahrens-Fox 1,000-gallon pumper has been placed in the new $85,000 Fairview fire engine house. The building is not quite completed but construction has progressed far enough to permit the apparatus to be housed there.

Southern Apparatus Co. Delivers Pumper to Wharton, Tex.

A 600-gallon pumper built by the Southern Fire Apparatus Company of Dallas, Tex., has successfully passed the twelve-hour test of the National Board of Fire Underwriters and has been delivered to Wharton, Tex. The company believes that this is the first type of apparatus completely built in the South that has successfully past such a gruelling test.

Booklet Issued on High Pressure Tests

About one year ago, fire officials were surprised by a test of a 1,000-gallon Ahrens-Fox pumper in New York city which developed 450 pounds pump pressure while discharging 350 g.p.m. New York city's high pressure system does not deliver water at a pressure greater than three hundred pounds per square inch.

A booklet has just been issued giving the results of the tests and newspaper account of the incident. According to the official figures, the pump delivered 1,014 gallons at 165 opunds pressure, 604 gallons at 265 pounds pressure (operating the major pumps only), 402 gallons at 400 pounds pressure (only minor side pump used), and 355 gallons at 450 pounds pressure, using only the minor side pump.

At a special test to demonstrate the reserve power, the pump delivered 355 gallons at 500 pounds pressure.

On the following day, the tests were rerun for the benefit of Chief Kenlon and Commissioner John J. Dorman. At this time, a pump pressure of 520 pounds was obtained. All the tests were made while drafting sea water through a fourteen-foot lift.

Supervised Watchman's Service Needed

Need for installation of first-aid fire-fighting equipment in tall tenements during the period of construction and the fact that if any reliance is to be placed on the protection afforded by the presence of a watchman, he should be a watchman in fact and should be supervised, are the outstanding conclusions contained in the recent report made by the New York Board of Fire Underwriters on the fire in a six story unfinished apartment house three weeks ago in the Highbridge section of the Bronx.

The fire which was of sixth alarm proportions spread rapidly. This wide area of the fire is attributed to the flammable construction of the building in its unfinished condition. All vertical openings were unprotected. Unplastered lath and other combustible material furnished ready fuel, and in addition to these, the fire had gained enormous headway before it was discovered.

The cause of the fire is still undetermined. The watchman entered the building at 10 a. m. and the fire broke out at 9 a.m., starting on one of the upper floors. It was discovered by some persons remote from the building. The watchman did not know the building was afire until the fire engines stopped at the door of his shanty which was located on the Anderson avenue side. The building is located at the apex of Anderson and Jerome avenues. It is admitted that the building could have been entered on the Jerome avenue side by trespassers and the watchman have no knowledge of it.

Seventy-five per cent of the building was destroyed. Fire swept through the entire north half of the building, causing a fifty foot section of the front wall to collapse. The building was insured for $155,000 and the loss is estimated at $116,000. The building was to have been ready for occupancy on May 1st.

There was no gas, electricity or steam in the building and no salamanders or other heating equipment. The only fire protection was the watchman. The wood lath was being nailed to the studding in preparation for the plastering, although actual plastering had not been started.

W. J. DALY.

Head of Magirus Company Dead

Hermann Magirus, president of the board of directors of the Magirus Fire Appliance Company in Ulm, Germany, and Councillor of commerce there, died after a short illness.

Mr. Magirus visited the United States in 1924 and was known to many fire chiefs and city officials in this country. He is the son of C. D. Magirus, who in 1851 started to build fire apparatus and in 1864 established the fire apparatus company that exists today.

Pottstown, Pa., Short of Funds—There are no funds on hand to pay the drivers of the three fire companies in Pottstown, Pa. The department hopes that the council will pay them their appropriations in advance, but since the city is ending its fiscal year, there is very little money on hand. The companies are negotiating loans to meet current expenses.

Walkout Stemmed in Pelham Manor, N. Y.—A walk-out of a large portion of the volunteer firemen of Pelham Manor, N. Y., was narrowly averted. The situation arose because a former battalion chief of New York city was appointed to make a fire protection survey. It was rumored that he would later be made head of the department. The firemen stood by their present head, Chief Anthony Galati. A meeting was called and Chief Galati explained just why the survey was being made.

Making Stretch to 30th Floor

(*Continued from page 232*)

If it is not necessary to use all of the four 2½" sections on the 29th and 30th floors, they should not be used; if two sections of 2½" hose are all that is necessary, there will be more pressure on the line.

In figuring the amount of hose and pressures extreme conditions are used. Twelve-foot stories are used instead of 10 feet, thereby increasing both back pressure, friction loss in hose and amount of hose used.

Figuring 12 feet to the story there will be:
29 × 12 = 348 feet heighth to 29th floor.
.434 × 348 = 151.032 lbs. back pressure.
100 ÷ 9.35 factor for two 3" lines siamesed = 10.69 feet of 2½" hose.
400 ÷ 2.6 factor for single line of 3" = 153.85 feet of 2½" hose.
153.85 + 10.69 = 165.54 feet of 2½" hose.
164 ÷ 50 = 3.28 sections of 2½" hose.
3.28 + 4 = 2½" sec. on 29th floor = 7.28 sec. 2½" hose.
275 ÷ (1.1 + .248 × 7.28) = 94.50 lbs. friction loss.
94.50 + 151.032 = 245.532 friction loss entire line.
275 — 245 = 30 lb. nozzle pressure, approximately.
1¼" nozzle 30lb. pressure = 253 gal. flow per min.

Figuring 10 feet to the story there will be:
29 × 10 = 290 feet heighth to the 29th floor.
348 — 290 = 58 feet less.
.434 × 58 = 25.172 lbs. less back pressure.
One 3" section of hose less also.
350 ÷ 2.6 = 134.61 of 2½" hose.
153.85 — 134.61 = 19.24 ft. of 2½" hose less.
134.61 + 10.69 = 145.30 ft. of 2½" hose.
145.30 ÷ 50 = 2.90 sec. of 2½" hose.
4 + 2.90 = 6.90 sec. of 2½" hose.
275 ÷ (1.1 + .248 × 6.90) = 97.86 lbs. friction loss.
131.86 + 97.86 = 229.72 total friction loss.
275 — 229 = 46 lb. nozzle pressure.
46 — 30 = 16 lb. more pressure on nozzle.
46 lb. nozzle pressure = 313 gal. minimum flow.

Solution by Lieut. John P. Pfann

The solution of this problem suggested by Lieut. John P. Pfann, of Engine Co. No. 213, New York Fire Department, is as follows:

I herewith submit my idea of how a stream could be had at an upper floor of a high building, assuming that the standpipe and elevators are out of order; using, where possible, the ideas and principles as taught by the New York Fire College.

The New York Fire College has taught: 1, that when stretching lines to upper floors of high buildings, the line should be stretched up the outside of the building, in order to minimize the damage by water in case the line should burst; 2, that lines should be siamesed to reduce friction loss as well as for long stretches; 3, that 3-in. hose should be used up to the front of the fire building, then reduced to 2½-in. hose, which is more flexible for handling.

Therefore the following plan incorporates these ideas; and a siamesed line is stretched to, say, the 35th floor; using an ordinary assignment of three engine companies and two truck companies, as follows:

The first due engine company would go to the 35th or the 34th floor, according to safety, taking with them and connecting backwards in the order given: One 1-in. open nozzle, two rolled up lengths of 2½-in. hose, one 2½-in. gate connection, one 2½-in. siamese (with clappers), and two additional rolled up lengths, the latter to be lowered (female end down) outside the building on a side facing a street front; a roof rope will be taken and line secured with approved knots. (At 12½-ft. per floor, 100-ft. of hose should reach the 27th floor, but the next company will be sent to the 28th floor in order to pull the lowered end in on the floor, so that an additional 100-ft. of 2½-in. hose can be connected in its turn, lowered, and secured with a roof rope, using approved knots.)

The first due truck company would go to the 28th floor, taking with them two rolled up lengths, roof rope, 6-ft. hook claw tool and an axe, the hook to be used to fish in the line, the other tools suggest themselves as the necessity may arise.

The other companies in turn would be assigned with the same equipment as latter company to the 20th, 12th and 4th floors respectively. Chauffeurs and engineers left in the street would see that a 3-in. line was run in from the engine and connected to vertical line. When the connections are made the water can be started at the required pressure.

We now have a single line stretched and water started, but the fire may be a stubborn one, so we keep on going as a precaution. Available chauffeurs and men will be assigned, two to a rolled up length and one with a roof rope, assigning them to the floors heretofore assigned in their proper order, the start being from the other inlet of the siamese, right on down to the street, and a 3-in. line in turn connected to another engine.

The men returning from the original assignment will be reversed, as follows: Those that went to the 35th floor will only be sent to the 4th floor and those that went to the 4th floor will be sent to the 35th floor, in order to equal the strain on the men, or perhaps it may be advisable to send an additional alarm in order to get fresh men.

Advantages of this Method

The advantages of above method follows:

1—2½ in. hose is more easily rolled up and handled, is lighter than 3 in. hose, which means a quicker operation and less chance for the fire to spread.

2—The carrying of 3 in. hose to such a height is almost impossible.

3—Two 2½ in. lines would mean less friction loss than one line of either 2½ in. or 3 in., and would permit of a stretch to a greater height due to a saving on friction loss, the energy saved could be used on head pressure.

4—If one line should burst, a continuous stream would still be available which could be used to prevent spread of fire or may extinguish the fire.

5—An additional line could be taken off at the fire floor to attack fire.

6—A line stretched straight down the building front would mean less friction loss than one which is permitted to loop in on various floors and if a line should burst, less water damage would result against a burst within the building.

7—An open nozzle is recommended so that line cannot be shut off and possibly stall the engine or burst hose. If stream is not needed it can be directed out of a window where water will do little damage.

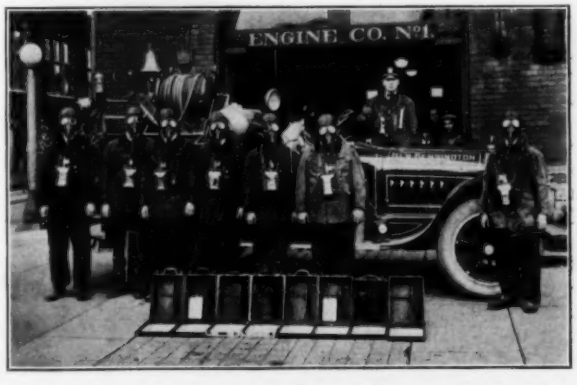
There are other details, such as offsets in buildings, pressures, etc., which can be brought into a problem such as this, but, it is only the ideas above which I submit for what they are worth.

Fireman Fights Fire in Own Home

This was more than the usual fire run for a member of the Pittsburgh, Pa., department—it was a fire in his own home. It was not an ordinary fire for there was loss of life, the two children of the family suffocated as they huddled in fear behind a door.

Lynch was a driver. The apparatus was directed down the street with more than the customary speed. In a flash he was up to his home, searching through various rooms for members of his family. Others of the company accompanied him with flashlights. They searched in the basement, in the attic but did not think to look behind a partition where later Chief Beckett found the two bodies.

The tragedy occurred while the fireman's wife went out shopping and while the children were supposedly playing in the attic.



Emergency Squad Established at New Kensington, Pa.

The fire department at New Kensington, Pa., has been equipped with Burrell All-Service Gas Masks and an emergency squad has been established. At the Kinlock Mine explosion, in which twelve men lost their lives, this squad was the first on the scene and they gave valuable assistance. Chief Edward Lawson, head of the fire department, is standing on the running board.

INDUSTRIAL PLANT PROTECTION

LARGE FIRE FIGHTING FORCE AT QUAKER OATS CO. FACTORY

Force Twice as Large as Cedar Rapids Department Where Plant Is Located—Four Battalions and One General Alarm Company Available

WHILE it may sound strange on first analysis, the industrial fire brigade at the Quaker Oats factory in Cedar Rapids, Ia., is twice as large as the municipal fire department.

It is in reality a picked department. Only those employees that have shown themselves to be cool in time of great excitement are permitted to join the plant's fire force. Out of a possible one thousand candidates, only 120 have been picked as firemen. These have been divided into four zone battalions commanded by captains who are familiar with conditions in buildings in which they are stationed.

Each battalion has a special number of bells as its signal of fire. Members of the battalion are workmen in the plant, but the minute their signal is rung they drop their work and dash to a picked location where their captain issues orders for taking care of any blaze that may have started in their territory. All workers in the plant are in the meantime supposed to continue with their duties.

Four Zone Battalions Organized

In addition to the four zone battalinos the Quaker Oats plant has a general company that responds to every fire alarm. In this company, are twenty-eight specialists from the repair department. Each man has his duty in case of fire. They rush to the scene of the fire, wherever it may be, quickly survey the situation and get busy. Some control the valves in sprinklers and stand pipes; some the sewer openings, and some guard against electrical hazards by disconnecting high tension currents into the building.

Three squads of men have been trained the last year in the use of hose, water for which can be supplied at the rate of 5,500 gallons a minute by five pumps taking the water direct from the river. In addition to the pumps the plant has two reserve pressure tanks containing 50,000 and 75,000 gallons of water respectively, enough to take care of a bad fire condition for an hour. There are places in the plant also that connect with the city water supply. Scattered throughout the plant there are 200 two and one-half gallon fire extinguishers.

This fire fighting equipment is used to protect the twenty-six separate buildings, having a total of 40 acres of floor space, in the Quaker Oats plant, largest plant of its kind in the world. The 120 men on the fire force are divided into three shifts.

The city of Cedar Rapids has 58 men, including the chief and master mechanic, in its two fire fighting shifts. It has 10,000 feet of 2½ inch hose, and 500 feet of 1½ inch hose, and pumps that will raise the city water pressure to 350 pounds.

A test call was sounded for "fire" on the fourth floor of warehouse 5. In a flash the ten men in that place were with their chief awaiting instructions. Within two minutes the first of the general squad of specialists had arrived, and within five minutes all were there.

From 3 p.m. until 7 a.m. the Quaker Oats plant is patrolled by watchmen who cover its entire 40 acres of floor space once an hour. It is here that the new watchman's supervisory system is put to use.

Adequate Watchman's Service

There are 165 watchman's report boxes placed in the plant, so situated that it is necessary for a watchman to pass every section of each building. These boxes are connected with the supervisor's office by a total of 75 miles of copper wire.

The supervisor sits in his central office. Before him are four recording machines and four sheet charts. As a watchman punches his report box the tape on the recording machine for his zone records exactly where he is and the time. This is copied by the supervisor on his office charts. If a man does not punch one of the boxes on his route for two or three minutes the supervisor begins to worry for fear he may be ill, or possibly injured in a fall. If he does not report for five minutes the supervisor telephones for him. Each watchman is equipped with a pocket telephone that can be plugged into the firebox to establish immediate connection with the supervisor's office. Should the delinquent watchman not answer soon after his telephone gong sounds the supervisor sends an alarm call to all watchmen in the plant. They plug their telephones into call boxes and he verbally instructs them to go at once to the building and floor from which their fellow watchman made his last report and to hunt for him.

Should the supervisor himself fail to pull his own key in the alarm system every ten minutes, after a warning buzzer sounds, the bells will ring throughout the plant warning the watchmen that something is wrong in his office.

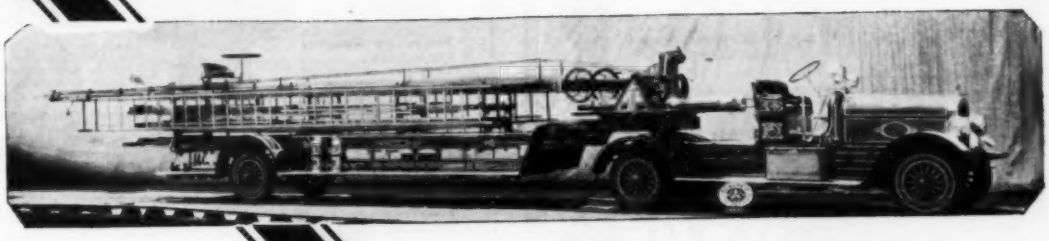
Precautionary Measures

In case a watchman making his rounds of the plant, or any other person, discovers a flame he breaks the glass in the fire box nearest him and pulls a lever that sounds the fire alarm in the supervisor's office. If it is not a bad fire the watchman extinguishes it himself or with help immediately rushed to him after the alarm. But, if the fire is at all serious the city fire department is at once notified. As the city call goes in, a runner, stationed always in the supervisor's office, notes the location of the fire and runs as fast as he can to the Second street and B avenue corner where he meets the firemen and directs them to the scene of the fire. This man's main duty is to get the fire location and run for the corner.

This new system means that the supervisor is in constant touch with his watchmen, knowing exactly where they are at all times whereas under the old clock system they were frequently out of communication for an hour at a time. It also establishes immediate telephone communication with all sections of the building so that help or instructions may be obtained in the quickest possible time in case of either accident or fire.

There are twelve men on the night shift. Four watchmen, a supervisor, and a runner are on duty from 3 p.m. until 11 p.m. From that hour until 7 a.m. another shift is on duty.

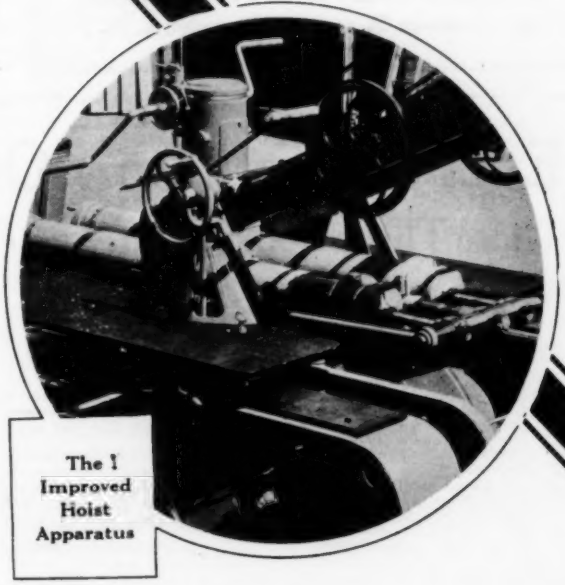
Van Buren, Ark., May Purchase Fire Apparatus—The Van Buren, Ark., council is considering the purchase of new fire apparatus.



Simpler *in operation* The Improved SEAGRAVE Aerial Ladder Truck!

The *improved* Seagrave Aerial Ladder Truck is better than any we have ever built. This is an outstanding engineering achievement, when you consider that Seagrave Aerial Ladder Trucks have been in use in every section of the nation for more than twenty-five years.

The new Seagrave Aerial Ladder Truck is lower and simpler in operation. While its principle remains the same, the spiral spring hoist apparatus has been improved for greater efficiency. This improved truck is built according to Seagrave's standard of dependable, lasting service.



The Improved Hoist Apparatus

The SEAGRAVE Corporation

COLUMBUS, OHIO

Branch Offices at:

Boston, Mass.
New Haven, Conn.
Philadelphia, Pa.
Chicago, Ill.
Dallas, Texas
Seattle, Wash.
Birmingham, Ala.
Kansas City, Mo.
Pittsburgh, Pa.
Los Angeles, Cal.
San Francisco, Cal.

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

Write for the Facts

EDDY VALVE CO.
Waterford, N. Y.
James B. Clow & Sons, Chicago Agents

6 Patented Features

ERICK SIREN

Thorough Weather Protection
Erick Sirens do not clog up. Snow and ice cannot enter and stop sounding rotor. Completely protected and sheltered from outside influences.

Features That Prove Supremacy

Instant Alarm
Every telephone is a fire alarm station, permitting operator to sound alarm **instantly**, giving your fire department a chance to get the jump on the fire.

Universal Sound Projector
The Erick Sound Rotor and Deflector is built to instantly send a Fire Alarm.

Our Free Trial offer is made in all sincerity. We welcome your inquiry.

ERICK ELECTRIC SIREN CO.
STATE AND FILLMORE AVE., ST. PAUL, MINN.

Triple Combinations

300-350 and 500 Gallons Capacity

Light and Heavy Hook and Ladder Trucks.
Miscellaneous Fire Fighting Equipment.
Fire Department Ladders.

Write us when interested

COMBINATION LADDER CO., Inc.
381 Fountain St. Providence, R. I.

JOHN H. CLAY, INC.

1320 Ridge Ave., Philadelphia, Pa.
Established 1864

Clay Automatic Door Spring Devices for fire stations save valuable minutes in getting to fires. Write for details.

Every Fire Dept. Officer Should Have
These Three Books—*Packed Full of Practical Information*

Questions and Answers for Battalion and Deputy Chiefs

by Geo. J. Kuss, Former Deputy Chief N. Y. F. D., and Fred Shepperd, B. Sc., M. E., Managing Editor, FIRE ENGINEERING. It contains 210 pages of invaluable instruction for progressive fire department officers, and is indispensable for Captains, Battalion and Deputy Chiefs and other officers studying for promotion.

It contains questions from promotional examinations throughout the country, with answers by Deputy Chief Kuss, (N. Y. F. D.) and Fred. Shepperd.

Price $2.00—postpaid $2.15.

Questions and Answers for Lieutenant and Captain

by George J. Kuss, Former Deputy Chief N. Y. F. D., and Fred Shepperd. A 290-page book of promotional questions and answers for candidates for lieutenants and captains.

It includes questions asked at promotional examinations in practically every city in the country where civil service examinations are held, with answers by Chief Kuss and our Editor.

Price $2.50 —postpaid $2.65.

Simplified Fire Department Hydraulics

By FRED SHEPPERD, B. Sc., M. E.

A brand new book describing in a simplified method all of the rules and formulæ required in the solution of fire department promotional examinations questions in hydraulics.

Also contains nearly 200 problems on hydraulics asked in examinations in large departments throughout the country. 170 pages fully illustrated.

Price $2—postpaid $2.15.

Use This Convenient Coupon to Order Your Copies Today.

Book Department
FIRE ENGINEERING
225 West 34th St., N. Y. C.

Please send me the books I have checked, for which I enclose money order for $———.

Questions and Answers for Battalion and Deputy Chiefs ☐
Questions and Answers for Lieutenants and Captains ☐.
Simplified Fire Department Hydraulics ☐.

Name .....Rank .....

Address .....Date .....

CONFERENCE HELD ON FIRE HOSE COUPLING STANDARDIZATION

Manufacturers Consider Means of Increasing Distribution of Gages and Turning Out Couplings Closer to Tolerance of Inspection Gages

REPRESENTATIVES of fire hose coupling manufacturers, inspection and insurance groups, and others interested in the problem of hose standardization, met on March 16 in the offices of the American Society of Mechanical Engineers to consider the manufacture, gaging and distribution of couplings made according to the National standard. The meeting was in charge of Prof. C. P. Bliss of New York University.

J. H. Howland, engineer of the National Board of Fire Underwriters who was one of the pioneers in this work, and P. C. Charnock, engineer of the New England Insurance Exchange, told of the work accomplished in the field. Thirty states are now carrying out extensive programs of standardization. Roughly about 2,700 municipalities have had their threads converted to the National or American standard.

Fall River was brought out as an example of the value of this work. Several months ago its thread was such that none of the neighboring departments had threads that corresponded to it. The commissioners were finally won over to the National standard coupling. When fire broke out in the Pocasset Mill recently and calls were sent out for assistance, out of the thirty-three departments that responded, Newport, R. I., was the only unit that could not connect with the standardized fitting.

Not all threads, it was pointed out, could be rechased. Sizes varying from 2 31/32 to 3⅛-inch could be changed. Some metal was too brittle, and cracked when expanded.

Charles H. Fisher, on the standardization committee of the New Jersey Fire Chiefs Association, stated that the cost of changing a coupling to the favored standard varied from zero where the city did not hire extra labor, to thirty-five cents at the most. The average cost was seventeen cents a coupling. The Akron Brass Manufacturing Company of Akron, Ohio, reported that they found it more difficult to convert hydrant threads.

Manufacturers brought out the difficulty in filling orders for couplings. Some towns which believed that their thread was National standard specified such couplings. When the order was shipped it was rejected because the couplings would not fit. Smaller communities when asked to send a coupling for measurements would send one that had been in service for a number of years. When sizes were taken from this sample, the finished product did not conform with the other newer couplings.

In order to simplify the field inspection sets for the smaller communities, those present at the meeting voted to eliminate the two plug gages from the set. This will reduce the price for the complete set by from seventeen to twenty-five dollars.

Many of the larger cities have been against hose standardization. New York city still stocks to its own pattern and consequently Jersey City, Hoboken and Newark, N. J., do not care to change their thread because the communities feel they would loose New York City's aid should a conflagration occur. Camden, N. J., banks on Philadelphia which is using a snap type coupling.

Inspection agencies are winning over a number of the smaller communities to the wisdom of using the National standard. Then the plan has been to go to the larger city and show that more aid could be furnished by the nearby villages and towns than could be expected from some distant first class city.

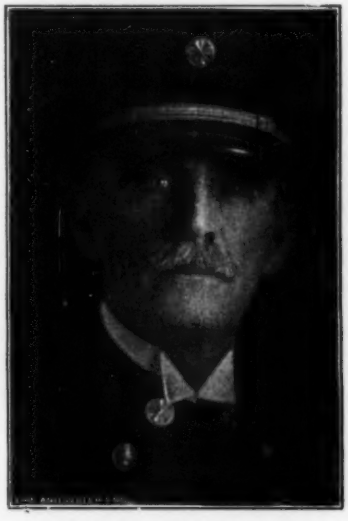
A great deal of constructive work was accomplished at this conference. There was an exchange of ideas between gage and die manufacturers and those making the couplings. The insurance engineers brought forth some of the problems encountered in the field.

The following men were present at the conference:

P. G. Agnew, Secty. American Engineering Standards Committee; C. H. Ball, Supt. Dept. Greenfield Tap and Die Corp.; J. Bergvall, Supvr. American Bureau of Shipping; C. P. Bliss, Chairman A. S. M. E. Standardization Committee; A. L. Boerner, N. Y. Mgr. W. D. Allen Manufacturing Co.; A. C. Boniface, Asst. to Vice-Pres. American-LaFrance and Foamite Corp.; M. T. Briggs, Treas. John H. Clay, Inc.; W. E. Brierly, John-Simmons Co.; A. L. Brown, Eng. Associated Factory Mutual Fire Insurance Companies; S. A. Brown, Vice-Pres. and Treas. Wirt and Knox Mfg. Co.; P. C. Charnock, Eng. New England Insurance Exchange; C. H. Fischer, Consulting Eng. New York; C. E. Darling, Standards Asst. A. S. M. E.; J. Gaillard, Mech. Eng. American Engineering Standards Comm.; W. H. Gourlie, Gage Division, Pratt and Whitney Co.; A. M. Houser, Prod. Eng. Crane Co.; J. H. Howland, Eng. National Board of Fire Underwriters; C. J. Kreiger, Spec'l Agent, Underwriters Laboratories; C. B. LePage, Asst. Secty. American Society of Mech. Eng.; N. F. McKeon, Eureka Fire Hose Manufacturing Co.; J. C. Meloon, General Fire Extinguisher Co.; J. E. Rennie, Chief Draftsman, A. P. Smith Mfg. Co.; P. V. Tilden, E. I. duPont de Nemours & Co.; W. W. Turner, Asst. Secty. Akron Brass Mfg. Co.; F. H. Viele, Treas. Automatic Hose Coupling Co.; N. N. Wolpert, Asst. Editor, FIRE ENGINEERING.

Waterbury Fire Losses For 1927

The annual report of the Waterbury, Conn., fire department for 1927, revealing that year as the fifth in heavy fire losses in that city, has been submitted to the Board of Fire Commissioners by Chief Henry H. Heitman. The report is a revelation of the excellent work accomplished by the department during the past year. It shows the value of the efficient service given Waterbury by its fire fighting force. Fire loss was reduced by more than $78,000 from the figure of 1926, despite the fact that the past year was marked by one of the city's most disasterous fires, that which destroyed the Moriarty building on East Main street with an estimated loss of $100,000.



Chief Henry H. Heitman

The 1927 loss at Waterbury was nearly $93,000 below the 1925 figure. Of the $377,007.75 loss sustained from fire during the year just ended, the report further showed that $339,340.28 was paid in insurance, and that slightly more than $37,600 of the loss was insured. The per capita loss for the year was $3.25, and the per capita cost of maintenance of the department was $4.16.

The value of the buildings involved in fires during the year was $3,482,800. The insurance on these buildings totaled $3,022,303. The damage was $178,916.91 and the amount of insurance paid was $160,198.64. Value of the contents of the buildings so involved was officially placed at $1,488,985.50. Insurance on the contents amounted to $1,230,070. The damage to contents was $198,090.84. Insurance paid totaled $179,141.64.

There were 30 false alarms turned in during the year, according to the report. A total of 803 alarms were received at headquarters.

T. F. MAGNER.

Firemen Held for Perjury

Two New York city firemen and a retired lieutenant who is now employed by the New York Edison Company, have been charged with perjury in a damage suit to collect for injuries, and recommended for action by the district attorney.

Each fireman sued the Walter Cruller Bakery for $15,000 for damages received when the fire truck on which they were riding was forced into a church to avoid striking a horse and wagon which was unattended and which wandered into the path of the fire truck.

Witnesses stated that the driver was in the wagon at the time of the accident. It was also brought out that in all probability the front wheels of the fire apparatus struck some obstruction in the road and that the steering wheel was wrenched from the driver's hand. The crash into the front of the church resulted.

After the jury had brought in a verdict favorable to the bakery, the supreme court judge ordered that a transcript of the proceedings be transmitted to the district attorney. The judge said:

"This is the most deliberate and rank perjury ever encountered in this court. There has been too much perjury in the courts and the court's action in the case will teach the people who perpetrate it, a lesson they will remember."

Steubenville, O., Defers Action—The council of Steubenville, Ohio, has not taken any action on awarding the contract for new fire apparatus. A number of concerns have submitted bids and $13,000 has been appropriated for the machine.

Plans Made for Dominion Chiefs' Meeting

Chief James Armstrong of Kingston, Ontario, Canada, secretary of the Dominion Association of Fire Chiefs has notified the members of the twentieth annual convention that will be held on July 24-27 in Kingston, Ont.

Chief James Armstrong
Secretary, Dominion Chiefs

The opening session will be held in the Memorial Hall of the city buildings. The remaining sessions will be held in the Hotel LaSalle, the convention headquarters. The exhibit hall will be located less than four hundred feet from the convention headquarters. Those intending to have exhibits are asked to correspond with Chief Dobert Dey, Pembroke, Ont., who is chairman of the exhibit committee.

The board of directors have selected topics for discussion. They include ventilation of buildings while on fire, training of firemen for small municipalities, traffic problems of cities and municipalities under 50,000 population, fire protection and inspection of buildings while under construction, scrubbers in floors as an aid to fire extinguishment as well as topics that may be presented by those present, for round table discussion.

Papers presented will be printed in pamphlet form, both in English and in French.

Three prizes have been offered to members securing the largest number of new members before July 1. The membership fee is five dollars and includes membership in the International Association of Fire Chiefs.

A ladies committee has been organized to care for the chiefs' wives or ladies of the party during the convention. Kingston has sufficient hotels to care for the visitors.

Bronx Section Troubled by Fire Bug

For a while residents of the Bronx section in New York city had a duplication of the excitement caused in Washington, D. C., recently when a pyromaniac became active. In this case, nine fires broke out within a small radius, in the heart of the Bronx section. One fire started in a coal bin, seven in basements, and one in a carriage under a flight of stairs.

The first fire started at 1:35 p. m. in the storeroom of the tenement at 430 E. 155th street. There were three separate fires when smoke was discovered by the caretaker and the flames extinguished. The police were notified.

Two hours later firemen were called to extinguish a fire in the basement of 410 East 148th street. Another fire was reported fifteen minutes later, three blocks distant, in a rubbish heap in the cellar. Fire was discovered at 4:40 p. m. at 598 Bergen avenue in the coal bin. Twenty minutes later, fire was reported in the basement of a two-story building, and at 6:45 there was a cellar fire.

The Bronx had a respite for two hours, but at 9 o'clock the worst fire started. It was at 531 Courtlandt Avenue, which is just south of 149th Street. Fire began in the hallway of the three-story frame building whose ground floor is used by the Central Union Gas Company as a storage space. On the third floor a gas company watchman, 65 years old, and his wife, 63, lived. He was sick in bed.

When the couple smelled the smoke they found their retreat downstairs cut off. They shouted, calling policemen and Hook and Ladder Company 17. At the rear of the building the firemen were able to climb onto a shed roof and put a ladder to the window. Captain Frank Rahilly of Hook and Ladder 17 helped him down. His wife in her excitement fell out of the window, landed on the shed and broke her right leg. Both went to Lincoln Hospital.

Eureka Issues Fire Record Book

Again the Eureka Fire Hose Manufacturing Company, 50 Church street, New York, has issued a daily fire report book that is being distributed free to fire department officials.

Space is provided for entering information that will prove valuable as fire department records. On the last page of this record book is instruction on the care of fire hose.

Massachusetts Chiefs' Club to Meet

The regular March meeting of the Fire Chiefs' Club of Massachusetts has been arranged for March 21 at 12:30 p. m., in the Parker House, Boston.

One of the things to be considered is the matter of insurance adjustments. The contention is that fire losses are settled for much more than the actual damage done. Then, as in the case of Boston, when the per capita fire loss is determined, the figures show unusually high, and fire insurance rates are increased.

Some very interesting discussions on the subject are expected at this meeting. William H. Hill of Belmont is secretary of the club.

E. J. Roberts Now Chief at Miami

E. J. Roberts, formerly first assistant chief of the Miami, Fla., fire department has been appointed head of the department to fill the vacancy caused by resignation of Chief William R. Coleman.

Chief Coleman was asked to resign by the city manager because of ill health. The resignation became effective on February 11. Chief Coleman entered the service on January 1, 1912, and worked his way up through the various offices. He was appointed chief on May 1, 1917, and held that post continuously until he resigned.

The newly appointed chief joined the Miami Fire Department on May 17, 1916. He was promoted to first assistant chief on March 1, 1920. Chief Roberts served in that office until his present promotion.

New York Accepts Football Challenge

The war is on! But of course, it is only the result of two prominent fire chiefs believing that their departments have the best football players.

At a meeting of the directors and officers of the International Association of Fire Chiefs in Philadelphia, Chief Ralph Scott of the Los Angeles Fire Department issued a challenge as follows:

"To any fire department on God's green earth: to play the men of his department a game of football, the game to be played on Franklin Field, Philadelphia on the sixteenth of next October."

Chief Kenlon and Fire Commissioner J. J. Dorman of New York who were present, accepted the challenge. It was agreed that New York organize a department from among its members. One of the rules agreed upon was that a member of the football team must have served three months in the department, in uniform, prior to October 15, 1928.

In an official letter to all fire companies Chief Kenlon said:

"We are, therefore, requesting all members of the uniformed force, between the ages of twenty-one and thirty-two years, who are athletes and who wish to try for the team, to send their names to the office, Chief of Department not later than April 1. Any men having played on a football team will so state in his application.

"Our pride and confidence in the firemen of New York led us to accept the challenge. We have competent coaches; every facility. With your whole-hearted cooperaton, we shall win."

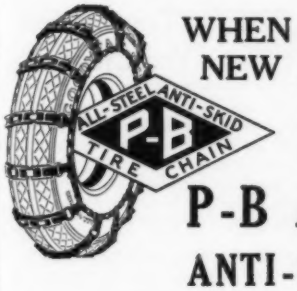
The war is on! May the best team score the highest.

Ladder Truck Delivered to Margate, N. J.—A Seagrave ladder truck has been delivered to Margate, N. J.

Weymouth, Mass., to Have New Station—A committee has been appointed in Weymouth, Mass., to select a site for a new fire station.

Amesbury, Mass., Opens New Station—A new fire station, erected at a cost of $60,000, was opened in Amesbury, Mass., on March 3.

Four Lieutenants Added to Revere, Mass.—The appointment of four new lieutenants for Revere, Mass., has been approved.



WHEN ORDERING NEW APPARATUS

SPECIFY P-B ALL-STEEL ANTI-SKID CHAINS

Tell the manufacturer you want P-B ALL-STEEL Anti-Skid Tire Chains—the chain approved by the Fire Chiefs at the 1927 Convention of the Fire Chiefs' Association. P-B Chains are in use on Salvage Corps and Fire apparatus in St. Louis as well as in many other cities. The tractor-traction prevents skidding or side slipping—makes turning and stopping positive. Links grip on any surface, yet never injure tires.

Write us for full particulars or let us send a representative to see you. Remember to specify P-B Chains in your order for new apparatus.

P-B Mfg. Company, Inc., 4221 Forest Park Blvd., St. Louis, Mo.

Worcester Alarm Signals

A correct size for every town and factory. Steam or air operated. The design of these signals has been tested and approved by many years of service.

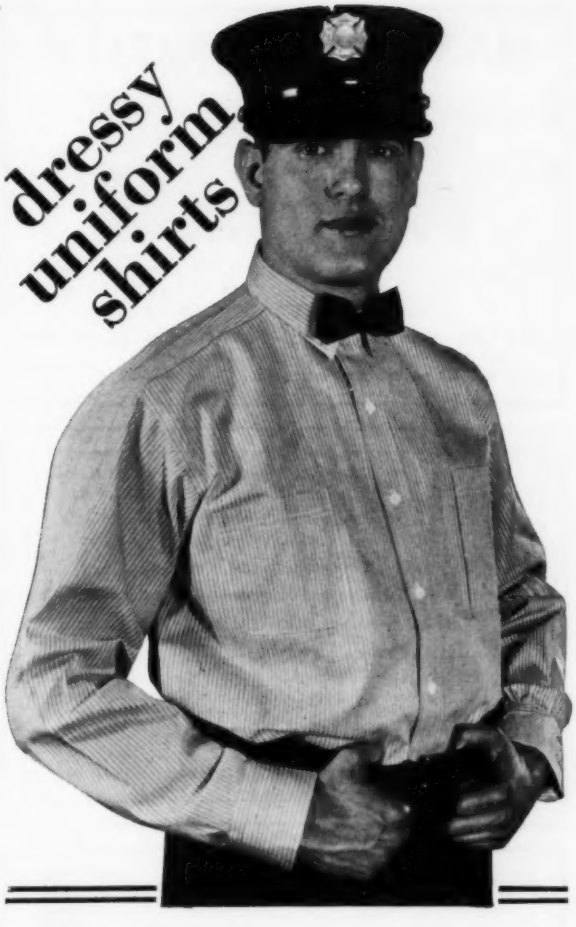
The long experience which stands behind this product is always at your service.

Ask for Catalog R-51

Union Water Meter Co.
Worcester, Mass.

New York Office
50 Church Street
Philadelphia Office
411 Bulletin Bldg.

WORCESTER ALARM SIGNALS



THE shirt is part of your uniform. To neglect this important item is to destroy the whole purpose and effect of uniformity. Let the men of your department wear one style and make of shirt and you'll see a vast improvement in their appearance.

Start right by selecting a two-collar Signal—always the best looking and most serviceable. The Signal in the picture is No. 21, made of striped blue TubTesT chambray with detachable laundered collars to match. This style was recently adopted by the fire fighters of Toledo and Kansas City. There are nine other patterns in light and dark shades in two collar and collar attached styles and we'll be glad to send samples of all of them on request.

SIGNAL SHIRT COMPANY
Racine, Wisconsin

Signal

MAXIM FIRE APPARATUS

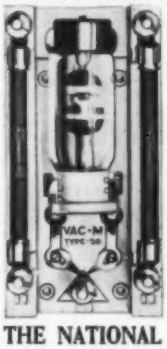
If your apparatus is Maxim-built it will prove dependable and reliable at all times.

Complete information upon request.

MAXIM MOTOR COMPANY, Middleboro, Mass.

Metropolitan Sales Agents:

The Woodhouse Manufacturing Co., 156 Chambers St., N. Y.



The Risk Is Too Great! Don't Take the Chance!

Think of the preventable loss of life and property that might result if your alarm instruments were forced out of commission by lightning or sneak currents and the alarm consequently delayed or lost.

Protect Your Fire Alarm System
With VAC-M Lightning Arresters.
Details on Request

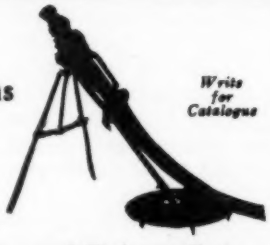
THE NATIONAL ELECTRIC SPECIALTY COMPANY
TOLEDO . . . . OHIO

HALE PUMPS

LONGER effective life, higher efficiency and greater freedom from trouble may be had by using Hale Dreadnaught Fire Pumps.

HALE FIRE PUMP CO.
Conshohocken, Pa.

Eastman Improved Platforms and Holders



Writs for Catalogue

are indispensable where high pressure service is required. With Eastman equipment any size streams can be easily handled by one man.

Eastman Nozzles and Deluge Sets

are designed by engineers who for over thirty years have specialized in equipment for producing fire-fighting streams that are unsurpassed for solidarity, distance and effectiveness.

Samuel Eastman Co.,
Concord, N. H.

Novo Acid Jars & Holders

of every description, stronger than lead and non-corrosive. Used by departments throughout the country.

Chemical Tanks and Lally Quick Opening and Self-packing Top for Chemical Tanks

Lally Improved Fire Hose Couplings, Fire Extinguishers and Charges, Fire Hose and Fire Department Supplies in General

Send for Complete Catalog

LALLY FIRE APPLIANCE CO.
Wilmington Brass Co., Wilmington, Del.

Preserve Your Copies

Every issue, as you know, is packed full of interesting and authoritative data, ideas, news, etc., that you like to keep handy for ready reference. Why not keep them all together in a binder? You'll find this special one a great convenience. The cost is only $1.75 and many of our subscribers are already using them. What about you?

Address:
Book Department,
Fire Engineering
225 W. 34th St., N. Y. C.

Name . . . . . .
Position . . . . . .
Address . . . . . .

BI-LATERAL FIRE HOSE

THE BI-LATERAL FIRE HOSE CO.
230 West Randolph St., Chicago, Ill.

A Quotation

"Four years ago you sold my Commissioners one thousand feet of Bi-Lateral Fire Hose against my will. For the past twenty years I have always stuck to the stiff multiple hose, being afraid if I got away from that my Commissioner would buy me cheap hose. Since using your Bi-Lateral hose and watching my men work with it I frankly say that I never knew what good hose was before. Enclosed you will find a Purchasing Order No. 728 covering another thousand feet. Couple this with the rocker lug coupling and send us twelve combination spanners, No. 45."

FIRE DEPARTMENT ACTIVITIES

Henry, Ill., Purchased Pumper—A 500-gallon Peter Pirsch pumper has been purchased by Henry, Ill.

Bayhead, N. J., Has New Fire Alarm—A new fire alarm system has been installed in Bayhead, N. J.

Fire Station Completed in Altoona, Ia.—A combined fire station and town hall has been completed in Altoona, Ia.

West Chester, Pa., to Have Celebration—The Fame Company of West Chester, Pa., will hold a smoker and entertainment to celebrate their ninetieth anniversary.

Volunteer Firemen of Troup, Tex., to be Paid—Each volunteer fireman of Troup, Tex., will receive $15 a year, the drill master, assistant chief and chief, $30 a year.

Atlantic Highlands, N. J., Buys Pumper—A 1,000-gallon Maxim pumper will be delivered to Atlantic Highlands, N. J., through the Woodhouse Manufacturing Company, local agents.

Mayville, Pa., to Cooperate with Others—The Mayville, Pa., fire department is working out a plan whereby it will be able to aid neighboring communities.

Department Organized in Murrysville, Pa.—An application has been filed for incorporation papers for a fire company in Murrysville, Pa.

Fennimore, Wis., May Purchase Apparatus—Fennimore, Wis., may purchase a community fire apparatus for rural protection.

Monticello, N. Y., Wants New Apparatus—Monticello, N. Y., is trying to raise funds for the purchase of a pumper of similar capacity to the one now in service.

Elkhorn, Wis., Purchased Pumper—Elkhorn, Wis., has purchased a 600-gallon Pirsch pumper. Delivery is to be made within sixty days.

Malverne, Ia., Observes Anniversary—The volunteer fire department of Malverne, Ia., has celebrated its thirty-fifth anniversary with a banquet.

Geneseo, N. Y., to Buy Fire Apparatus—Fire apparatus will be purchased jointly by the village and town of Geneseo, N. Y.

Upper Darby, Pa., Fighting for Paid Force—As a nucleus for a paid fire department, Upper Darby, Pa., will have two paid firemen in each company.

Fishkill, N. Y., Prepares for Anniversary—Protection Engine Company of Fishkill, N. Y., is planning for a banquet to celebrate its ninety-ninth anniversary.

Hershey, Pa., Will Have New Fire House—Work is progressing rapidly on the construction of a new fire station in Hershey, Pa.

Williamsburg, Ia., Considers Farm Protection—A movement has been started in Williamsburg, Pa., for rural fire protection.

Des Moines to Inspect Apartment Houses—Following a bad fire in Des Moines, Ia., the department started plans to make an inspection of all apartment houses in the city.

Apparatus Crashed into Auto in Philadelphia—Engine No. 24 of Philadelphia crashed into an automobile while on the way to answer a fire alarm. No one was injured.

Ocean City, N. J., to Have New Fire House—Land has been purchased in Ocean City, N. J., on which to erect a new fire station.

Coatesville, Pa., Purchases Fire Apparatus—Coatesville, Pa., has purchased a triple combination pumper for $11,500. Plans are being made for a formal housing.

St. Joseph, Mich., Has New Paid Department—After weeks of controversy, St. Joseph, Mich., has a paid fire department to supersede the volunteer organization that had been in force for fifty-one years.

Delaware County Plans for June Convention—There was a large attendance of the Delaware County Firemen's Association members at a meeting held in Lancaster, Pa., to plan for the coming convention of the association to be held on June 9.

Plans Made for Western Pennsylvania Convention—Plans are being made for the 1928 convention of the Western Pennsylvania Firemen's Association that will be held in Meyersdale on August 13 to 18.

Retired Engineer Offers Fire Protection Service—Frank W. Fitzpatrick, retired engineer of the New York Fire Department, is now offering a fire protection service to property owners. He is located at 246 Fifth avenue, New York City.

Boston May Have Arson Squad—Fire Commissioner Eugene C. Hultman of Boston, Mass., is considering organizing an arson squad to respond to fires and to make investigations of all blazes of suspicious origin. He believes that such a squad could do much to check incendiary fires.

Worcester, Mass., Planning New Stations—The erection of two new fire stations is being planned in Worcester, Mass. Chief McCarthy has requested a new 750-gallon pumper and an 85-foot aerial ladder to replace ladder three that has been in service for twenty years.

Fireman Gets Belated War Reward—Charles J. Crammer, member of Asbury Park, N. J., department has just received an award for bravery under fire during the world war. He established connection between the front lines and a headquarters company during the offensive north of Verdun.

Many Transfers in Dubuque, Ia.,—Twenty transfers from lieutenants down and affecting every company with the exception of a truck company, were made in Dubuque, Ia., under orders from Chief Joseph W. Fisher. This move was taken to bolster up the various companies.

East Orange, N. J., Has New Pumper—A new pumper, purchased for $13,000 has been placed in fire headquarters of East Orange, N. J. The hook and ladder truck damaged in a collision several months ago is being repaired and will be back in service soon.

Bryn Mawr, Pa., Firemen Hold Banquet—The fire department of Bryn Mawr, Pa., held its nineteenth annual banquet. Dr. James Shoemaker, surgeon for the department, was presented with a watch in recognition of the services given the department.

Seaford, N. Y., Votes for Fire Apparatus—Seaford, N. Y., has voted to appropriate $20,000 for the purchase of fire apparatus. The department will spend $5,000 for apparatus and the rest for new hose and the drilling of cisterns from which to draft water.

Comm. Goodrich Opens Tenth New Station—Fire Commissioner Goodrich of Chicago has opened a new station for Truck Company 15 and Engine Company 45 at Forty-Sixth street and Cottage Grove avenue. This is the tenth fire station that has been opened since Mr. Goodrich became fire commissioner.

Atlantic City Tests Two Candidates—Deputy Chiefs Charles Miller and Joseph Leeds will each be given an opportunity to take charge of the Atlantic City, N. J., department to see who is better fitted to fill the post vacated by the death of the late Chief John S. Barnett. One candidate will serve until April 15 and the other from that date until June 1.

Plans Drawn for Laconia, N. H., Station—Plans have been drawn for a two-story brick fire station in Laconia, N. H. The first floor will have three double doors and a small entrance. On the second floor will be a bed room, kitchen, dining room, living room, a large hall for the firemen and a card room. The cost of construction is estimated at $25,000.

Olyphant, Pa., Contracts for New Fire Alarm System—Olyphant, Pa., has placed an order with Harrington-Seaberg Corporation for a complete fire alarm system including one four-circuit switchboard, battery rack, motor generator set, circuit repeater as well as other central station equipment. Thirty-three fire alarm boxes will be furnished.

N. F. P. A. Advocating Model Arson Law—The Fire Marshals section of the National Fire Protection Association and the National Board of Fire Underwriters are trying to get New York, Mississippi, Louisiana, South Carolina, Virginia, Kentucky and Massachusetts to pass the model arson law. Ten states passed this law last year. The laws of Arkansas are about three-fourths satisfactory.

Colorado Springs Limits Speed of Apparatus—The city manager of Colorado Springs, Col., has ordered that fire apparatus on the way to a fire must keep within the speed laws of the city. Two fire trucks have been wrecked within a short time while on the way to fires. The city manager said, "It is better to arrive at a fire a few seconds later than not at all."

PROPOSED IMPROVEMENTS

North Abingdon, Plymouth Co., Mass.—Plans being made for the purchase of new apparatus for the local fire department.

Mt. Ephraim, Camden Co., N. J.—Mount Ephraim Vol. Fire Co. No. 2 making plans for erection of new fire station.

Oreland, Montgomery Co., Penn.—Funds being raised for the purchase of a new piece of apparatus for the volunteer fire department.

Hyndman, Bedford Co., Penn.—Borough Council to purchase new piece of apparatus for the Hyndman Volunteer Fire Dept.

Brownsville, Cameron Co., Tex.—An election is to be held in the near future to vote on a $100,000 bond issue for erection of new fire station, installation of fire alarm system.

Galax, Grayson Co., Va.—Fire department raising funds for the purchase of fire apparatus.

Cheswick, Alleghany Co., Penn.—Fire department requested Council for a new fire station.

Murrysville, Westmoreland Co., Penn.—Fire department organized here to be known as the Murrysville Volunteer Fire Co. No. 1.

Jersey Shore, Lycoming Co., Penn.—Special election is to be held April 24th to vote on a $20,000 bond issue for purchase of a pumper and erection of a fire station.

Irvington, Essex Co., N. J.—A new fire engine, fifteen fire alarm boxes and electrical equipment for the fire alarm system are to be purchased by the City Commission for the local fire department according to reports.

Sayville, Suffolk Co., N. Y.—At recent election it was voted to appropriate $15,000 for the purchase of a new pumper for the fire department.

Proposals for Triple Combination Pumping Engine

CLIFFSIDE PARK, NEW JERSEY

Bids opened March 26th, 1928

Sealed bids and proposals will be received at the Borough Hall by the Borough of Cliffside, N. J., on March 26, 1928, at 8:00 p. m., for the following:

One Triple Combination Pumping Engine, Chemical and Hose Motor car.

Motor to be of the six cylinder type; cylinders to be cast in pairs; bore to be not more or not less than 5½" and stroke to be not more or not less than 6" horse power to be not more or not less than 72.6 S.A.E. rating.

Pump to be of the rotary gear type without gibbs or springs, and to have a capacity of 1,000 gallons per minute at 120 lbs. pump pressure.

Tires:—Goodrich—Super Semi-Pneumatic.

Chemical tank to be of the Champion Babcock Type.

Crankshaft to be not more or not less than 2⅝" in diameter and to have four bearings.

Bidder must maintain a service station within 30 miles of the Borough of Cliffside Park where service parts and mechanics are maintained.

Bidder must have at least 1,000 of the machines herein specified in successful operation throughout the United States.

Bidder must guarantee machine for its life or existence, and also to furnish a periodical inspection service during the life or existence of the machine, free of any cost to the Borough of Cliffside Park.

A certified check in the amount of $5,000 must accompany all bids. Surety bonds are not acceptable.

If the successful bidder shall refuse or neglect to execute contract within five days after notice of award has been given, the amount of deposit shall be forfeited to and retained by the Borough of Cliffside Park as liquidated damage for such neglect or refusal, but if they shall execute within the time aforesaid, the amount of deposit shall be returned.

The borough Council reserves the right to reject any and all bids.

ARTHUR H. ABRAMS,
Borough Clerk.

3-21

CONVENTION DATES

May 7-10—NATIONAL FIRE PROTECTION ASSOCIATION (International). 32nd Annual Meeting, Atlantic City, N. J. Secretary, Franklin H. Wentworth, 40 Central Street, Boston, Mass.

May 10-11—ARIZONA STATE FIREMEN'S ASSOCIATION. 5th Annual Convention, Bisbee, Ariz. Secretary, Chief W. J. Nemeck, Douglas, Ariz.

May 18-19—FOUR-COUNTY FIREMEN'S ASSOCIATION. Annual Convention and Parade, Allentown, Pa. Secretary, P. J. McNally, Catasaqua, Pa.

June—WISCONSIN STATE FIREMEN'S ASSOCIATION. 41st Annual Convention and Tournament, (tentative date) about middle of June, at Kiel, Wis. Recording secretary, E. Philip Mueller, Jefferson, Wis.

June—OKLAHOMA STATE FIREMEN'S ASSOCIATION. 34th Annual Convention and State Firemen's Training School (tentative date), Blackwell, Okla. (Exact date to be fixed by Executive Board.) Secretary, Charles Slemp, 651 East 12th St., Oklahoma City.

June 5-7—KENTUCKY STATE FIRE CHIEFS' AND FIREMEN'S ASSOCIATION. 10th Annual Convention, Middlesboro, Ky. Secretary, Captain S. G. Render, Fire Department Instructor, 303 Speed Building, Louisville, Ky.

June 5-7—NEW YORK STATE ASSOCIATION OF FIRE CHIEFS. 22nd Annual Convention, Troy, N. Y. (meeting in conjunction with Mayors' Conference). Secretary, Chief John H. Golden, Cohoes, N. Y.

June 5-7—OHIO FIRE CHIEFS' ASSOCIATION. 11th Annual Convention, Marion, Ohio. Secretary, Chief Philip J. Harty, Fire Department, Youngstown, Ohio, Sheet and Tube Company.

June 8-9—DELAWARE COUNTY FIREMEN'S ASSOCIATION. 22nd Annual Convention and Parade, Chester, Pa. Recording Secretary, Timothy McCarey, Chester, Pa.

June 16—LEBANON COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Palmyra, Pa. Secretary, William I. Kutz, Box 233, Myerstown, Pa.

June 19-21—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 39th Annual Convention, Kingston, N. Y. Secretary, Chief Chris W. Noll, Poughkeepsie, N. Y., Fire Department.

June 19-22—ANNUAL SHORT COURSE OF FIRE PREVENTION, CONTROL AND EXTINGUISHMENT. 4th Course, University of Illinois, Champaign-Urbana, Ill. Secretary, Ill. Firemen's Association, Asst. Chief Roy W. Alsip, Champaign, Ill.

June 20-23—PROVINCIAL FEDERATION OF ONTARIO FIRE FIGHTERS. Annual Convention, King Edward Hotel, Toronto, Ont., Can. Secretary-Treasurer, David H. Lamb, 132 Bellevue Avenue (2) Toronto.

June 25—NORTHWEST FIREMEN'S ASSOCIATION. Semi-Annual Convention. Centerton, Ark. Secretary-Treasurer, F. M. Brock, Bentonville, Ark.

June 26-29—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 6th Annual Convention, Burlington, Vt. Secretary-Treasurer, Chief John W. O'Hearn, Watertown, Mass., Chairman, Exhibit Committee, Frank M. Tiffany, Gamewell Company, 1022 Commonwealth Avenue, Boston.

June 28-30—ALLEGHANY COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Turtle Creek, Pa.

July 4-6—DOMINION ASSOCIATION OF FIRE CHIEFS. 20th Annual Convention, Kingston, Ont. Secretary, Chief James Armstrong, Kingston.

July 5-7—SOUTHEASTERN FIRE CHIEFS' ASSOCIATION. Annual Convention, Atlanta, Ga. Secretary, Chief H. E. Whitener, Hickory, N. C.

August—UTAH STATE FIREMEN'S ASSOCIATION. 21st Annual Convention, Binham Canyon, Utah. (Date to be set at April meeting.) Secretary, Harris E. Anderson, Fire Headquarters, Salt Lake City, Utah.

August 1-2—CENTRAL DISTRICT VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Clearfield, Pa. Secretary, John E. Johnson, DuBois, Pa.

August 22-24—VIRGINIA STATE FIREMEN'S ASSOCIATION. 42nd Annual Convention, Ocean View, Va. Secretary, Chief J. B Gordon, Newport News, Va.

Sept. 11-13—ILLINOIS FIREMEN'S ASSOCIATION. 41st Annual Convention, LaSalle, Ill. Secretary, Roy W. Alsip, Asst. Chief, Fire Department, Champaign, Ill.

Sept. 18-19—IOWA FIREMEN'S ASSOCIATION. 51st Annual Convention, Independence, Ia. Secretary, E. E. Parsons, Marion, La.

Sept. 18-23—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 35th Annual Convention and School of Instruction for Firemen (Tentative Date), Sacramento, Cal. Secretary, State Fire Marshal Jay C. Stevens. Merchants' Exchange Bldg., San Francisco, Cal.

Oct. 1-5—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. Annual Convention, Uniontown, Pa. Secretary, Charles F. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 9-11—RAILWAY FIRE PROTECTION ASSOCIATION. Annual meeting, place to be selected later by Executive Committee. Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md.

Oct. 15-17—EASTERN ASSOCIATION OF FIRE CHIEFS (Eastern Division, I. A. F. C.). First Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. (Just preceding I. A. F. C. Convention.) Secretary, Chief J. H. Golden, Cohoes, N. Y.

Oct. 17-20—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 55th Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. Exhibits at Second Regiment Armory. Secretary, Chief James J. Mulcahey, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibits, Chief August Gerstung, Elizabeth, N. J.

Oct. 22-24—KANSAS STATE FIRE CHIEFS and FIREMEN'S ASSOCIATIONS and WOMEN'S AUXILIARY. 13th and 42nd Annual Conventions and 3d Meeting, respectively, Liberal, Kans. Secretary, Chief K. D. Doyle, Wamego, Kan.

N. Y. Officers to Join Eastern Group

Through the efforts of Chief John Kenlon of New York City, director of the I. A. F. C., a campaign has been started to have the captains and lieutenants of the department join as members of the Eastern Association of Fire Chiefs, a section division of the main organization. The circular soliciting membership reads in part as follows:

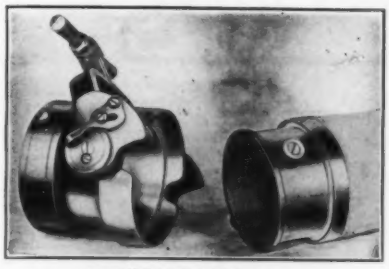
"It is proposed to make this an association for fire chiefs that will actually meet the needs, solve fire department problems and be of value and assistance to every chief. The policy and continuing program will aim at (a) Establishing standards of apparatus, equipment and practical fire methods; (b) More effective fire prevention work under the direction of the fire chief; (c) Adequate and reliable water supplies from the fire protection standpoint; (d) Actual demonstration of various modern fire fighting methods; (e) Prepare and promote the adoption of municipal and state laws for the betterment of fire departments, building laws and fire prevention work; (f) Establishing a death benefit fund.

"Membership in the E. A. of F. C. includes membership in the I. A. of F. C. and entitles members to participate in executing this program, copies of proceedings, fire manuals and other publications, copy of the monthly publication 'Fire Chief,' an association emblem and other benefits."

The secretary of the association is Chief James Golden of Cohoes, N. Y.

Fire Department Organized in Greenup, Ky.—A fire department has been organized in Greenup, Ky., with E. R. Adkins, present chief of police, as head of the department.

SPEEDY SCIENTIFIC!



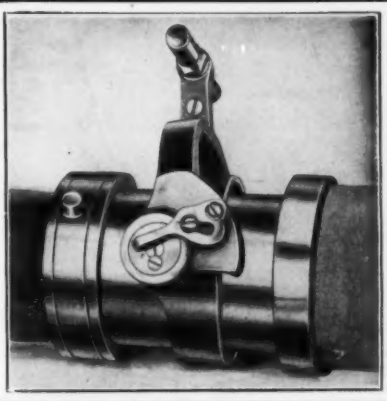
ECONOMICAL EFFICIENT!

This shift-connecting and disconnecting threadless coupling guarantees a speedy getaway when falling walls or uncontrolled fire threaten the safety of men and apparatus. Push the handle for a positive, leak-proof connection—Pull it and it disconnects instantly. This National Threadless Coupling eliminates all threading and misthreading—Solves all hard suction problems—Cannot Leak, Freeze or Jam — No wrenches—No Gasket Wear—Sturdy bronze construction—Built to outlast the apparatus—Easily installed on any pumper. Backed by five years of gruelling service. Write for descriptive literature.

Threadless Couplings for Fire Engines, Oil Tanks and Trucks, Oilhose, etc.

National Standard Threadless Coupling Corp.

Executive Office: 215-217 Beach 122nd Street, Rockaway Park, N. Y.



ARTHUR H. BLANCHARD

Manufacturer of

"BLANCHARD ANGLE NOZZLE TIPS"

Served 10 years as a permanent fireman in Worcester, Massachusetts, received patent on Angle Nozzle January 15, 1915, and in 12 years has covered the world with Angle Nozzles. "The sun never sets on them."

Take a tip from Blanchard and save your men.

25 Hampshire St. Cambridge, Mass.

COREY Hydrants as manufactured by "Rensselaer" are being used to fight fire in every State of the Union. Made of the very best material and workmanship.

"The Rolls-Royce among Fire Hydrants"

RENSSELAER VALVE CO.,
TROY, N. Y.

ROTARY PUMPS
FIRE HYDRANTS

Waterous Dependable

Send for our Complete Catalog
Agents in Principal Cities

WATEROUS COMPANY
St. Paul, Minnesota

Fire Hose for Hard Use
Made with Solid Woven Cover

Quaker Fire Hose has the strength to stand hardest treatment in fire service; ability to resist high internal pressures, and toughness to cope with abrasion from dragging or rough handling.

The tough, circular woven multiple jacket and strong rubber inner tube have made it a favorite with many fire departments.

Send for detailed information.

QUAKER CITY RUBBER CO.
Wissinoming, Philadelphia

Branches: New York Chicago Pittsburgh San Francisco

KilSoot

Puts Out Chimney Fires

A better, safer and surer way to prevent and extinguish chimney fires is offered to fire chiefs and fire prevention bureaus in the use of "Kilsoot."

We repeat our offer to send liberal samples and full details regarding this remarkable chemical product — gladly furnished upon request.

"Make KilSoot Standard Equipment!"

KILSOOT CHEMICAL COMPANY
1834 Broadway, New York, N. Y.

New Victor Gas and Fume Mask

Better Rubber. Longer Life. Better Fitted. Moulded to Fit the Face. Better Vision. Renewable Lenses. Better Air. Better Work. Low Prices. High Quality.

Over 5,000 Victor Gas Masks in Service

Full Line Fire Dept. Supplies and Equipment.

New 43 Edition Catalog on Request

The Woodhouse Mfg. Co., Inc
156 Chambers St., New York

D. A. Woodhouse, Pres. and Gen. Mgr. George J. Kuss, Vice-Pres. and Treas

FALSE ALARMS

SAM BOYD WAS READY

Chief Sam Boyd of Knoxville, Tenn., says that there was one time that he was well prepared for an emergency. This does not mean that Chief Boyd will always travel around with nurses. If he did, the town gossips might wag.

But in this particular incident, firemen fighting a fire found that a woman had fainted in the excitement. The men did not know what to do. Just about that time, the chief drove up with a trained nurse in his car, and the woman was soon well again.

Chief Boyd had started from his home to take the young lady, who was nursing his wife, back to town. The alarm came in and she decided that she would like to go to the fire. That's what Sam Boyd calls being prepared.

NOT CONSIDERED

Bids were called for the construction of the central fire station. A careful contractor bid in competition with a bunch of fly-by-nighters. After the bid was submitted, the contractor rushed to the director of public safety to explain that he forgot to send in his bid complete.

"The bid I sent in didn't include the brick work, plastering and cement work," explained the contractor excitedly.

"Oh that's all right," said the city official, "you weren't low anyway."

The Collector of Internal Revenue has been mailing a lot of letters to his acquaintances and although they bore no R.S.V.P., there has been a good response from our fire department friends.

VERY ACCOMMODATING

Station 12 was a very old station. The sanitary fixtures were far from being modern and the wash room was infested with cockroaches. Sullivan was sent to the nearest drug store for some powders. He was peeved because he was disturbed from a close poker game. He said snappily to the drug clerk:

"I want some insect powder."

"Do you want to take it with you?" asked the clerk sweetly.

"Of course not," was the terse reply. "I'll send the cockroaches to you so that you can give the stuff to them."

WHOSE COAT?

Even firemen know when Saturday night comes around. Mike became lavish that night and went to the barbers. On the way out he met a station comrade.

"Come on, you just have about time to walk down to the station. Get your coat and I'll wait for you."

So the two walked over to the apartment house in which Mike lived. Mike cupped his hands and shouted so that his wife on the third floor might hear him:

"Marie! Marie! Throw me down my overcoat, will you?"

Down came the overcoat. Mike put it on and both started walking for the station. His friend looked at the coat in surprise and said:

"Gee, this is the first time that I knew you were a lieutenant."

ADVICE TO THE ROOKIE

Show some respect for another man's views
Tho' his point of view you can't see.
Be careful of all that you say and do,
Men cannot always agree.

Do not be boastful when you have your way.
Many a victory by silence is won.
And sometimes a victor has dearly to pay,
Don't jump at conclusions, my son.

And do not let pride be master my lad
Success must not go to your head.
Remember the men that are leaders today
At one time were glad to be led.

Do not lay down when the going is hard
Or quit in the midst of the strife
For the word of another, have mighty regard
And you'll be a man all your life.

MARMADUKE BUDNAN.

These winter months it is impossible to decide whether to go to Florida for the fishing or to Chicago for the shooting.

TIME TO LEARN

A chief was conducting a verbal examination to select two firemen to fill vacancies in his department. Selecting one applicant he asked:

"Do you know the difference between a stick of dynamite and a cigarette?"

"No sir, I don't," replied the would-be fireman.

The chief looked at the man scornfully and said:

"Well, you had better find out."

LOCATION DIDN'T COUNT

The fire commissioner in this city was a gruff man with a very sarcastic disposition. Going home from the city hall one night, he saw a fireman in front of the station deporting himself in a manner that he thought was unbecoming a fireman. The fire-fighter was ordered to report.

The fireman hobbled into the office the next day. The commissioner stared at him. The fireman felt uneasy and said somewhat as an apology:

"I am a little stiff from bowling."

The commissioner roared back, "I don't care where you come from, state your business."

HE WAS HANDICAPPED

Two little country darkies accepted an invitation of their cousin to visit them in the city. And so the country children were paraded down on the main thoroughfare to see the sights. In the distance could be heard the screech of approaching fire apparatus. Suddenly a motor cycle policeman rushed up the street intersection, parked the machine and then rushed out to direct traffic.

This was all very interesting to the two country youngsters. One of them finally said:

"Gee, boy! Look a' da' man a-run' roun' wid a win'-shiel' on 'e nose."

FIREMEN MAY PLAY

Fire commissioners of Inwood, L. I., decided not to close the meeting rooms at the fire station on Sunday. Firemen's wives have been complaining and said that the men played cards and pool on the Sabbath.

Chief Bowker defended the men and stated that $1,200 had been spent in fitting up the room and that it was all right for the men to play there on Sunday.

Courtesy, Judge

"Thank Heavens, There's a Pump Handy"

MATHEWS

(Reg. U. S. Pat. Off.)

FIRE HYDRANTS

for

DOMESTIC

and

HIGH PRESSURE

Service

NOTE—

The positive waste valve.

All operating threads are dry, being above the stuffing-box.

No toggles, no small, quick-wearing parts.

All moving parts are bronze or bronze-bushed.

The outside casing permits replacing a two-way standpipe with a steamer and two-way standpipe without digging up the ground.

An easily installed
EXTENSION SECTION
readily adapts them to new grades.

VALVES and BOXES
CAST IRON PIPE
(Sand-Cast or "Sand-Spun")
FITTINGS

R. D. WOOD & CO., Phila., Pa.

BRAXMAR

BADGES

have been the recognized standard for fire departments for almost 50 years. Used everywhere. More than 900 designs. Send for illustrated catalog and prices.

C. G. BRAXMAR CO.
242 W. 55th St., N. Y. C.

MORSE

FIRE BOAT EQUIPMENT

Invincible and Callahan Nozzles

Fire Department Supplies

are in use throughout the country and giving unsurpassed service.

Every fire official should be fully acquainted with Morse equipment and have our catalog and other descriptive literature on file for ready reference whenever considering the purchase of new equipment.

You will find that it pays.

Write for Catalog

Andrew J. Morse & Son, Inc.
221 High St. Established 1837 Boston, Mass.

BADGES

of Every Description

QUALITY
GUARANTEED

Right Prices
Prompt Delivery

Write for latest catalogue and price list

EVERSON-ROSS CO
88 Chambers St., New York

NORTHERN

ROTARY

PUMPS

"MORE GALLONS PER HORSE POWER"

Northern Fire Apparatus Co.
900 Eighteenth Ave., N.E.
Minneapolis, Minn.

THE INTERNATIONAL LINE includes Speed Trucks for 1½, 1½, and 2 ton loads and Heavy-Duty Trucks for loads up to 5 tons. Municipal equipment available for every purpose. 136 direct Company-owned branches in the United States.

INTERNATIONAL HARVESTER COMPANY
of America
[Incorporated]
606 S. Michigan Ave. Chicago, Ill.

INTERNATIONAL
HARVESTER
COMPANY
TRUCKS

Type 90—750 gallon triple combination delivered to the city of Pittsburg, Kansas.

Progressive Fire Engineering

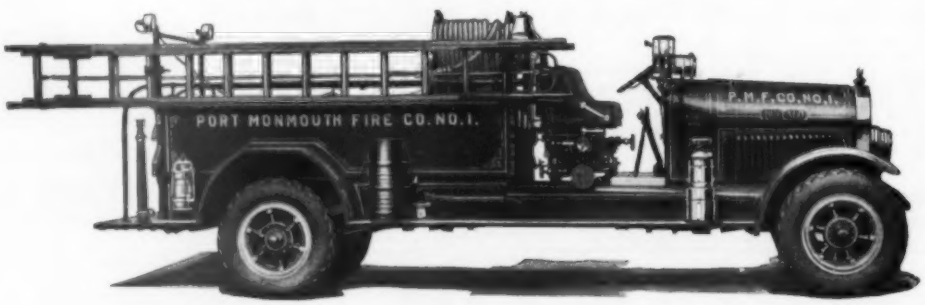
Modern Engines: In every sense of the word Mack engines are modern-designed, high compression power units built to operate under 1928 conditions.

Modern Pumps: Designed and tested to deliver greater capacities at higher pressures than ever before attained. These pumps are built in capacities from 500 to 1300 gallons per minute.

Modern Brakes: The Mack-built four wheel brakes give both the fireman and the apparatus every advantage in 1928 traffic.

FOR FURTHER INFORMATION WRITE TO MACK-INTERNATIONAL MOTOR TRUCK CORP., FIRE ENGINE DIVISION, 25 BROADWAY, NEW YORK.

Buffalo Type 50



Speaks For Itself In
Construction — Service — Power

Write for Detailed Specifications

BUFFALO FIRE APPLIANCE CORP.

44 Central Ave., Buffalo, N. Y.

Your Catalog Page

Fire Protection Equipment And Supplies

1 Acid Siphons.
2 Adaptors for Changing Hydrant Threads.
3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
7 Alarm Systems, Industrial.
8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Thermostatic.
10 Asbestos, Clothing
11 Badges Insignias, Buttons, etc.
12 Banners, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Fire Alarm, Municipal.
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Caps, Firemen's.
23 Chains, Non-Skid, Fire Apparatus.
24 Chassis for Fire Apparatus.
25 Chemical Engines and Tanks.
26 Chimney Cleaning Compounds.
27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
29 Combination Chemical & Hose Cars.
30 Cutting & Welding Equipment, Blow Torch.
31 Cutting & Welding Equipment, Electric.
32 Deluge Sets.
33 Door Openers, Fire Station, Automatic.
34 Extinguishers, Fire, Soda & Acid.
35 Extinguishers, Fire, Tetrachloride.
36 Extinguishers, Fire, Foam.
37 Extinguishers for Chimney Fires.
38 Fire Boat Nozzle Equipment.
39 Fire Department Supplies, General.
41 Fire Exit Devices, Door Opening.
42 Fire Alarm Posts.
43 Fire Escapes, Portable.
44 Fire Escapes, Rigid.
45 First Aid Equipment.
46 Flare Lights.
47 Flashlights, Hand.
48 Foam Liquid for Extinguishers.
49 Gas Masks and Respirators.
50 Gas & Smoke Helmets.
51 Gasoline & Oil Handling Equipment.
52 Goggles, Firemen's.
53 Helmets, Metal, etc.
54 Hose Carts, Reels & Racks.

Waiting?

This page is here to make it *convenient* for you to get complete specifications and prices from *reliable* manufacturers of equipment needed for your department. It is *your* page to use freely without any obligation.

To get the information you want, just mail in the coupon below with your name and address and numbers that indicate the equipment listed below on which you would like descriptive literature.

We will then notify reliable manufacturers of your interest in such equipment and request that they send you complete information. They will gladly do this and it will be a pleasure for us to help you in this way. No charge whatever! Help yourself!

For Information on Any Equipment Not Listed, Write on This Page or Use Separate Sheet.

55 Hose Clamps.
56 Hose Fire.
57 Hose, Chemical.
58 Hose Holders.
59 Hose Jackets.
60 Hose Standardization Tools.
61 Hydrant Draining Pumps.
62 Hydrants, Fire.
63 Jacks for Fire Trucks.
64 Jacks, Shoring & Prying.
65 Ladders, Fire.
66 Lightning Arresters.
67 Motorcycles, Fire Dept. Equipped.
68 Nets, Life.
69 Nozzles, Pipes & Misc. Brass Goods.
70 Packings, Pumps.
71 Pads, Pole Hole.
72 Paints, Fire Resisting.
73 Primming Ether, Motor.
74 Pumping Cars, Standard.
75 Pumping Cars, Foam.
76 Pumps, Fire Apparatus.
77 Pumps, Fire Service, Stationary.
78 Pumps, Portable, for Fire Protection.
79 Record Books, Fire.
80 Relief Valves.
81 Reviving Apparatus, Oxygen.
82 Rubber Clothing.
83 Searchlights.
84 Shingles, Fire Retardant.
85 Shirts, Firemen's Special.
86 Sirens, Apparatus & Chiefs' Cars.
87 Sliding Poles.
88 Soda & Acid Chemicals.
89 Spark Plugs, Fire Apparatus & Motorcycles.
90 Squad and other Auxiliary Cars.
91 Sprinkler Head Shut-Offs.
92 Sprinkler Supervisory Service.
93 Sprinkler Systems, Automatic, Foam.
94 Sprinkler Systems, Automatic Water.
95 Starters, Fire Apparatus, Automatic, Air.
96 Steam Fire Engines.
97 Tarpaulins & Fire Blankets.
98 Tetrachloride Chemicals.
99 Thawing Equipment, Hydrant.
100 Tires, Fire Apparatus, Pneumatic, Solid, Cushion and Non-Skid.
101 Tractors.
102 Traffic Clearing Systems.
103 Triple Combination Pumping Cars.
104 Uniforms.
105 Water Towers.
106 Wheels, Cushion.
107 Whistles, Fire Alarm, Compressed Air.
108 Whistles, Fire Alarm, Steam.
109 Whistles, Fire Apparatus.
110 Wrecking Trucks.

---------- TEAR OFF HERE ----------

FIRE ENGINEERING

225 West 34th St., New York City.

As a fire protection official I should like to have descriptive literature and complete information mailed to me, without cost or obligation, on the equipment indicated by the following numbers:

Nos.....

Nos.....

Nos.....

Date.....

Name.....

Position.....

Street.....

City and State.....

.....

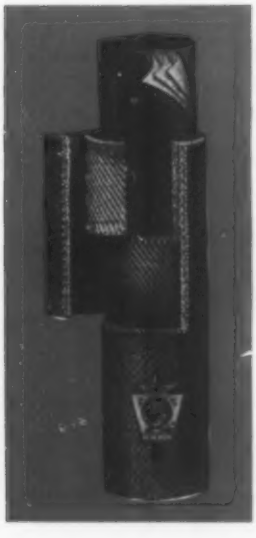
.....3-21

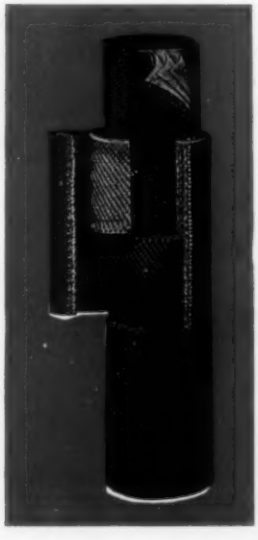
Where Fabric Fire Hose is made—Plant at Sandy Hook, Conn.

Why Buy Fabric Hose?

(Every Fire Official Should Read This)

BECAUSE we are so proud of the secrets used in its manufacture that we tell you all about them. Because our illustrated booklet "Wax and Para Gum Treated Fire Hose — How It is Made" explains many unique and really important points of advantage. Because it is a hose made to stand up under conditions that would make ordinary hose unserviceable in a fraction the time. Because it has a Loose inner tube, with its many advantages. Because it is absolutely impervious to moisture and will not mildew or rot. Because, in short, Fabric Fire Hose is light, pliable, compact, has great strength, is free from friction, kinking or twisting, and, Because it is the cheapest in the long run.





Fabric Fire Hose Co.

9-15 Park Place, New York, N. Y.

124-126 W. Lake Street, Chicago

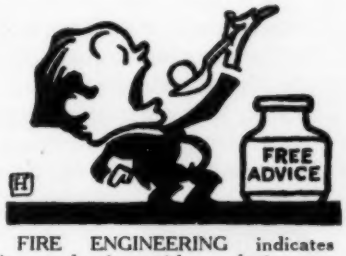
Atlanta
Boston
Columbus
Dallas
Binghamton
Baltimore
Minneapolis
Portland
San Francisco
Los Angeles
Newark
Pittsburgh

ADVERTISING INDEX

Advertising Pays — in Fire Engineering

	PAGE
Ahrens-Fox Fire Engine Co.	*Front Cover*
American District Telegraph Co.	227
American LaFrance & Foamite Corp.	223
Bi-Lateral Fire Hose Co.	252
Blanchard, Arthur H.	255
Braxmar Co., C. G.	257
Buffalo Fire Appliance Corp.	258
Clay, Inc., John H.	248
Combination Ladder Co.	248
Darling Value & Mfg. Co.	226
Eastman Co., Samuel.	252
Eddy Valve Co.	248
Erick Electric Siren Co.	248
Eureka Fire Hose Mfg. Co.	*Back Cover*
Everson-Ross Co	257
Fabric Fire Hose Co.	260
Federal Electric Co.	*Inside Front Cover*
Firestone Tire & Rubber Co.	262
Hale Fire Pump Co.	252
Information for Buyers	**259**
International Harvester Co. of America	257
Kilsoot Chemical Co.	255
Lally Fire Appliance Co.	252
Mack Trucks, Inc.	258
Maxim Motor Co.	252
Morse & Sons, Inc., Andrew J.	257
National Electric Specialty Co.	252
National Standard Threadless Coupling Corp.	255
Northern Pump Company	257
P-B Mfg. Co.	251
Pirsch & Sons Co., Peter	*Inside Back Cover*
Quaker City Rubber Co.	255
Rensselaer Valve Co.	255
Seagrave Corporation	247
Signal Shirt Co.	251
Sterling Siren Fire Alarm Co.	228
Union Water Meter Co.	251
Waterous Company	255
Waukesha Motor Co.	225
Wood & Co., R. D.	257
Woodhouse Mfg. Co.	255

When Ordering New Equipment



Patronize the Manufacturers You Find Listed Above

They are leaders in their respective lines and are in position to take the best possible care of your requirements.

The fact that they are using advertising space in FIRE ENGINEERING indicates they want your inquiries and will be glad to submit specifications and prices without placing you under any obligations whatever.

They are ready and anxious to serve you courteously in every way possible. Be sure to write them for complete information when considering new purchases—and place your orders with them.

They are helping us make the paper better by their advertising. You can help them and help us and help yourself by giving them your business. Let's all pull together! All will benefit.

The Publishers

The Mark of Quality

"Our Fire Truck has been equipped with the same set of Firestone Gum-Dipped Tires for more than two years, and this is to advise you that they have given uninterrupted service.

We are well pleased with the performance of these tires and would not hesitate to recommend Firestone Tires where lives and property are at stake."

Yours very truly,
W. Giddens, Chief,
Perry Fire Department,
Perry, Fla.

Recommended by Fire Departments Throughout the Country

The need for utmost tire safety under all conditions—for trouble-free, on-the-minute performance—has brought Firestone Gum-Dipped Tires into fire fighting work in practically every section of the United States.

Gum-Dipping gives Firestone tires special qualities—saturating and insulating the cords of the carcass with rubber and protecting them from high-speed heat, friction and wear. The Firestone safety tread provides rows of non-skid studs, scientifically designed and arranged to resist slip or skid in any direction.

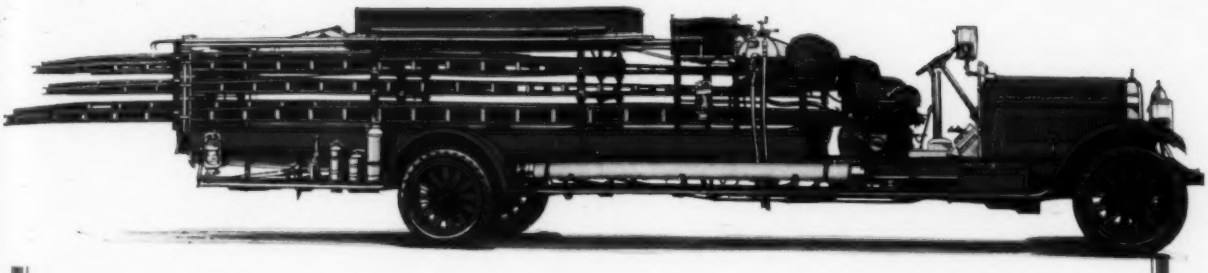
You can take advantage of these fire fighting aids by calling on your local Firestone Dealer. With his knowledge of tires and his quick service always available, you can be sure that your apparatus *is prepared* for any emergency that arises.

MOST MILES PER DOLLAR

Firestone

GUM-DIPPED TIRES

AMERICANS SHOULD PRODUCE THEIR OWN RUBBER.. Harvey S. Firestone



Unfailing Dependability and High Efficiency Are Products of Experience

HIGH efficiency and unfailing dependability are qualities that can not be built into a fire engine or a motor driven ladder truck in a hurry. In Pirsch fire fighting apparatus, these qualities are the products of years of experience and specialization.

The Pirsch Standard Four-Way Truck and Pumper is a highly developed and highly efficient unit. Every feature of construction is the result of years of intensive effort in designing, improving and refining. This complete equipment is designed, engineered and built by this organization.

This Company pioneered in the development of motor driven, fire engines and ladder trucks. Every advancement made in the automotive industry or in engineering in general has been taken advantage of in perfecting this equipment. Pirsch ladders are recognized everywhere as the ultimate in trussed fire ladders. Built of specially selected woods carefully dried and seasoned for three to five years before using.

The Pirsch Standard Four-Way Ladder, Chemical Hose and Pumper (750 gal.) illustrated above, is in service in the U. S. Navy Yard, Mare Island, California.

Full information and specifications on this equipment will be gladly mailed on request.

PIRSCH
EST 1857

The Pirsch Standard Four-Way Ladder Truck and Pumper

is shown above. This highly efficient unit has a 750 gal. all bronze pump; 600' cap. hose box; 40 gal. chemical tank and about 300' of Pirsch trussed ladders. The Motor is 105 H. P., 3½" carefully balanced crankshaft. Extreme accuracy and finest construction throughout distinguish this equipment.

PETER PIRSCH & SONS CO.

Factory and Home Office
Kenosha, Wis.

Eastern Office
11 Moore St., New York, N. Y.

EUREKA
FIRE HOSE

Note the four distinct plies of fabric in this famous Eureka 4-ply Hose. For more than fifty years the famous fire hose brands of Eureka manufacture have been known for service and quality wherever fire-fighters meet.

May we send you a free copy of our Daily Fire Report Record Book?

Eureka Fire Hose Manufacturing Company

50 CHURCH STREET, NEW YORK CITY

ATLANTA BOSTON CHICAGO COLUMBUS DALLAS DENVER DES MOINES DETROIT
KANSAS CITY LOS ANGELES MINNEAPOLIS NEW YORK PHILADELPHIA PORTLAND SYRACUSE

FIRE ENGINEERING, MARCH 21, 1928
PRINTED BY THE WILLIAMS PRESS, ALBANY, N. Y.